

THE OFFICIAL

ARMY INFORMATION DIGEST

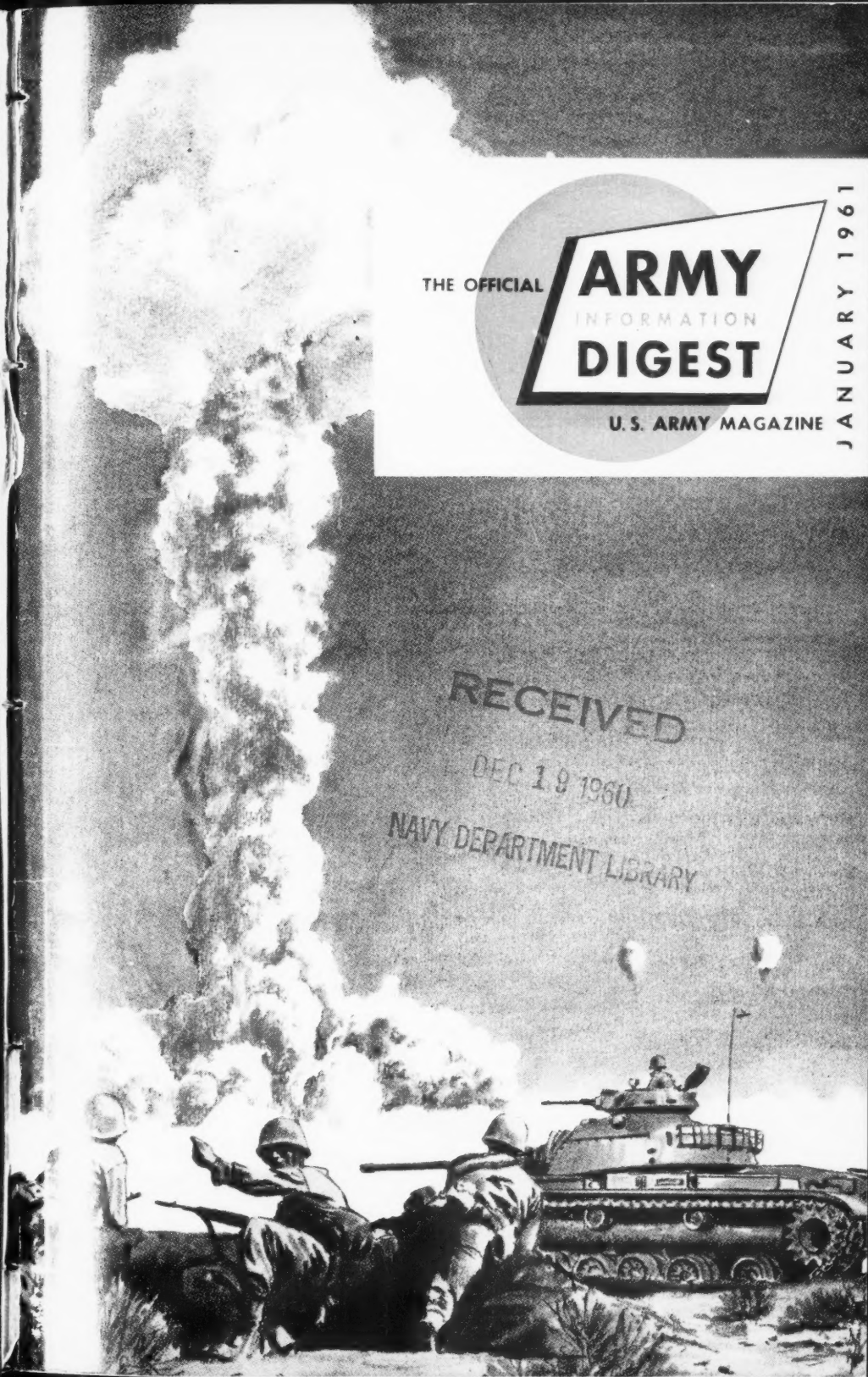
U.S. ARMY MAGAZINE

JANUARY 1961

RECEIVED

DEC 19 1960

NAVY DEPARTMENT LIBRARY



ARMY INFORMATION DIGEST



THE OFFICIAL MAGAZINE OF
THE DEPARTMENT OF THE ARMY

The mission of ARMY INFORMATION DIGEST is to keep personnel of the Army aware of trends and developments of professional concern.

The Digest is published under supervision of the Army Chief of Information to provide timely and authoritative information on policies, plans, operations, and technical developments of the Department of the Army to the Active Army, Army National Guard, and Army Reserve. It also serves as a vehicle for timely expression of the views of the Secretary of the Army and the Chief of Staff and assists in the achievement of information objectives of the Army.

Manuscripts on subjects of general interest to Army personnel are invited. **Direct communication is authorized to: Editor, Army Information Digest, Cameron Station, Alexandria, Va.**

Unless otherwise indicated, material may be reprinted provided credit is given to the Digest and to the author.

Use of funds for printing this publication approved by Director, Bureau of the Budget, 10 June 1960.

Picture Credits: Unless otherwise indicated, illustrations are by U.S. Army, except p. 39, center and bottom, by USIS.

COVER: Delivering nuclear devastation to the battlefield under closely controlled conditions is a team operation, ranging through the weapons development role of Defense Atomic Support Agency, to delivery of fire by Artillery and its exploitation by Infantry and Armor.

COMMAND LINE

Army Views On Vital Issues

ON ALTERNATIVES TO ATOMICS

"The fear of total nuclear war could conceivably inhibit the Soviets from using atomic weapons, if other means could achieve their purpose. Should this prove true, we are right now in a period of development of other weapons which would not carry with them the threat of total destruction—for we are subject to the same pressure as they, perhaps to greater pressures, in that we are more concerned with welfare of our people and our allies. If the Communists succeed in attaining a superiority in these new chemical and biological weapons, which we cannot match or which we cannot defend against, our nuclear strength could be of academic value."

*Major General Marshall Stubbs,
Army Chief Chemical Officer,
before the American Chemical Society,
Cleveland, Ohio, 8 April 1960.*

ON THE URGENCY OF TIME

"One of the Army's most pressing present problems is how to provide tomorrow's weapons and equipment—and how to do it in the face of mushrooming costs and rapid technological change—how to do it 'yesterday' when 'tomorrow' is already here!"

*Lt. Gen. Arthur G. Trudeau,
Chief of Army Research and Development,
before National Security Industrial Association,
New York, 28 September 1960.*

ON RESERVE STRENGTH— A DECISIVE FACTOR

"I can visualize no war of the future in which the Army National Guard and the Army Reserve would not be called upon promptly to furnish units and personnel to augment the Active Army. That is why we continue to emphasize the importance of maintaining our civilian components in the highest possible state of combat readiness, and that is why the true meaning of the term 'One Army' far transcends the fact that all components wear the same uniform."

*General George H. Decker, Army Chief of Staff,
at Chicago Tribune awards ceremony,
Chicago, Illinois, 15 October 1961.*

FEATURES

Atomic Weaponry for the Future . . . 2

Brig. Gen. Richard H. Harrison

Monitor of the Skies 10

Our Nuclear Weapons Are Safe . . . 13

Army ROTC Looks to the Future . . 18

Maj. Gen. Frederick M. Warren

The Military Album 28

Maj. Gen. Christian H. Clarke, Jr.

Today's Soldier Is a Ready Reader . 32

Agnes D. Crawford

The Next Horizon 40

SFC Samuel H. Alexander

Medicare Up to Date 48

Brig. Gen. Floyd L. Wergeland

You Can Count on Payday 56

Maj. Gen. Paul A. Mayo

Taste, Too, Is a Factor 62

David R. Peryam

Index to Volume 15 71

BRIEFS

Know Your Neighbor 38

Home of the Army Dollar 60

News of Professional Interest 67

Amphibious, Air Mobile M113 69

New Grenade Launcher 81

EDITOR
Lt. Col. Robert J. Coakley

ASSISTANT EDITOR
Maj. Aaron C. Adkins

PRODUCTION EDITOR
Lt. Charles G. Wellborn, Jr.

SENIOR ASSOCIATE EDITOR
Samuel J. Ziskind

ASSOCIATE EDITORS
Owen J. Remington
Raymond B. Klee

ART DIRECTOR
T. S. Patterson

THE OFFICIAL

ARMY
INFORMATION
DIGEST

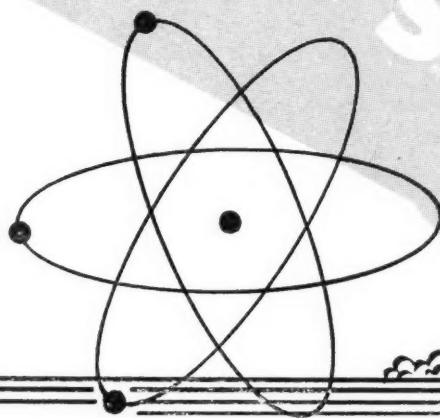
U. S. ARMY MAGAZINE

JANUARY 1961
VOLUME 16 NUMBER 1

Defense Atomic Support Agency has the vital task of providing technical, logistical and training advice and service to insure safety, reliability in

Atomic V

F



Brigadier General Richard H. Harrison

ON 16 July 1945, in a remote desert area southeast of Socorro, New Mexico, the sleepy dawn sky was ripped asunder by a brilliant flash of light and flame. In less than one-hundredth of a second nature seemed altered with an enormous surge of energy, surpassed only by the sun.

Code-named "Trinity," that fission

BRIGADIER GENERAL RICHARD H. HARRISON, USA, is Deputy Chief, Defense Atomic Support Agency.

of nuclear material was the world's first atomic explosion.

By order of the President, the Army had established a super-secret organization known only as the Manhattan Engineer District. Its mission was to develop and produce an atomic bomb as soon as possible. Major General Leslie R. Groves, who commanded the project, had priority on the Nation's top military and civilian scientists. Success of the Trinity device was the culmination of their many years of research, analysis and interpretation

Weaponry For the Future

of countless laboratory experiments in the almost unknown areas of atomic phenomena.

The use of a nuclear weapon in a combat role followed at once. In August over Hiroshima, Japan, and again three days later at Nagasaki, the weapon helped to hasten the capitulation of the Japanese Empire and the end of the war.

Man had indeed unlocked the door of the atom's secret, and opened a new era of history. Certainly, military science and art date their modern strategic and tactical concepts from that time.

At the conclusion of World War II, it was very properly recognized that the use of nuclear energy extended beyond the field of purely military application. Accordingly, the Atomic Energy Act of 1946 created the Atomic Energy Commission (AEC), a civilian agency reporting directly to the President, which was set up to exercise government monopoly over both the military and commercial aspects of atomic energy.

Commercial application has since ceased to be a strictly governmental function, but is still closely controlled by the AEC through licenses and patents. Under the law, the military retained certain functions dealing with military application of atomic energy, and these were vested in the Manhattan Project's successor—the Armed Forces Special Weapons Project (AFSWP). Maj. Gen. Groves, under whose leadership the first atomic bomb was produced, became the first Chief of the newly organized AFSWP, and was charged with providing nuclear weapons support to the Army, Navy and Air Force. As originally set up, AFSWP was responsible directly to each of the three service Chiefs.

DASA Organization

WITHIN the framework of the President's Reorganization Act of 1958, AFSWP was redesignated the Defense Atomic Support Agency (DASA) in 1959. Under its new charter, the agency is responsible to the Secretary of Defense through the

Atomic Weaponry for the Future

Joint Chiefs of Staff. Its mission is to provide technical, logistical and training advice and service in the atomic weapons field to the Secretary of Defense, the Joint Chiefs of Staff, the Military Departments and the Military Services within those departments, and to the Unified and Specified Commands, and to supervise Department of Defense atomic weapons testing.

Major General Harold C. Donnelly, USAF, Commander, Field Command, DASA, is at present also Chief of DASA, pending appointment of a new Chief by the Department of the Army.

DASA is jointly staffed by members of each Service, and the position of Chief, DASA, is rotated among the Services. The two Deputy Chiefs (currently Brigadier General Richard H. Harrison, USA, and Brigadier General Douglas C. Polhamus, USAF) are appointed from Services other than that of the Chief, in order that each Service may have senior representation. All key positions are divided among the Services.

DASA headquarters is located in Washington where it acts in an all-Service planning role and as the central Department of Defense atomic weapons coordinator at the national level. DASA maintains close liaison with the AEC and all other pertinent governmental and civil agencies.

A subordinate element of DASA is Joint Task Force-Seven, also in Washington. JTF-7 is the operational agency of the Department of Defense charged

with conducting the DOD portion of nuclear tests in conjunction with the AEC, and supports the AEC in weapons testing. At present, because of the lack of test activities, JTF-7 is at reduced strength.

Field Command, Defense Atomic Support Agency, the largest subordinate element, is DASA's operational command, with headquarters and main activities located at Sandia Base, Albuquerque, New Mexico. The Commander of Field Command, always appointed from a Service other than that of the Chief, DASA, is presently Major General Harold C. Donnelly, USAF.

Like the Washington headquarters, Field Command has two Deputies of General or Flag rank from Services other than that of its Commander. Other military personnel are appointed from among the Services.

WITHIN DASA's mission are five major areas of responsibility:

- staff assistance to Office, Secretary of Defense, and Joint Chiefs of Staff;
- research in weapons effects;
- atomic tests;
- weapons development; and
- assistance to the Services.

In providing staff assistance to the Office of the Secretary of Defense and the Joint Chiefs of Staff, DASA advises and assists in preparing plans for the dispersal and distribution of atomic weapons. Current information on the status of production,



Brig. Gen. Richard H. Harrison
Deputy Chief,
Defense Atomic Support Agency

modification, stockpiling and retirement programs is maintained. There is a continuous review of AEC schedules to insure conformance with Department of Defense requirements.

The AEC is basically responsible for research, development, testing and production of atomic weapons. DASA acts as the coordinator among the Services in the fulfillment of their needs and requirements, and acts as the principal DOD coordinator with the AEC on all of these matters.

DASA is responsible to the Office of Secretary of Defense and the Joint Chiefs of Staff for assuring that nuclear weapons effects information is obtained and disseminated. Information requirements are generated by the need of commanders for new and better operational planning factors. Requirements also may arise in weapons system development programs.

Weapons effects information is obtained both by research and by full-scale testing. Our Nation's voluntary suspension of nuclear testing denies the latter; therefore DASA's effort now consists of coordination and management of theoretical studies and laboratory experiments which simulate actual tests.

Useful simulation devices include exploding wire facilities, dynamic loading machines, and pulse reactors. In exploding wire experiments, huge amounts of electricity are released very quickly through an extremely fine wire, causing it literally to atomize by explosion. Thermal energy from a nuclear detonation can thus be represented on a tiny scale.

Dynamic loading machines, using either specifically designed conventional explosives or high pressure gases released through quick opening valves, develop tremendous pressures to simulate the rise time, peak pressure, and duration of a nuclear weapon's shock wave. Pulse reactors create nuclear radiation through a controlled chain reaction which releases nuclear energy, simulating the nuclear radiations



Atomic cloud surges up as Marines in exercise at AEC's Nevada Proving Ground jump out of foxholes after blast.

Atomic Weaponry for the Future

created by a nuclear weapon explosion.

Each Military Department also maintains installations and staffs to gather effects information. Part of DASA's responsibility in this field is to coordinate research activities and present a single integrated budget for the entire DOD effort in this area.

An advisory group, the Weapons Effects Board, is used by the Chief, DASA, for this purpose. Representing all Services, the board consists of a Steering Group and a number of Technical Panels, each devoted to a specific aspect of nuclear weapons effects. Panel members are experts in specific fields of interest into which they are inquiring. The Steering Group is composed of management level representatives of DASA and the Services.

On the basis of the Weapons Effects Board's recommendations, the Chief, DASA, assembles and submits a coordinated DOD program of nuclear weapons effects research and simulation to the DOD Director of Defense Research and Engineering for final approval. That program contains not only an explanation of what is to be done and why, but also indicates who will accomplish the work.

Role in Field Testing

IF field testing should be resumed, DASA would consolidate Service requirements, prepare plans for the military phases of the tests, and budget for those items not normally included in separate Service budgets. DASA would recommend to the Joint Chiefs of Staff the composition and control of the organization (such as JTF-7) to conduct the tests; and as requested by the JCS or the Services, it would provide technical liaison and assistance for operational evaluation tests involving nuclear weapons. At the conclusion of such experiments, DASA would coordinate and consolidate the reports and analyses of test results and disseminate them to appropriate agencies.

The most recent example of this procedure was Operation Hardtack in 1958. Of the many shots fired during Hardtack perhaps the best known were the high altitude detonations known as Teak and Orange.

These shots and their attendant experimental programs were planned by DASA and coordinated with the Joint Chiefs of Staff in early 1957. Technical coordination of the experimental program was delegated to DASA Field Command, and the operational and logistical aspects were placed under the cognizance of the Commander, JTF-7, made up of members of the Army, Navy and Air Force. When the Hardtack operation moved to the Pacific early in 1958, full command was vested in Commander JTF-7.

Teak and Orange were fired from Johnston Island in July and August 1958 by the Task Force, using Redstone missiles launched by a U. S. Army team of the Army Ballistic Missile Agency. The shots were spectacularly successful, and provided a wealth of information on the effects of nuclear explosions on the ionosphere. The resulting reports are currently being published and distributed by DASA.

Steps in Weapon Development

AN agreement between the Department of Defense and the Atomic Energy Commission defines the responsibilities for development, production and standardization of nuclear weapons. In general, the DOD determines the military characteristics, suitability and acceptability of weapons, while the AEC is primarily responsible for the "atomic" portions. DASA provides liaison and guidance to ensure that AEC products are compatible with those elements of a complete weapon system produced by the Department of Defense or its contractors.

An illustration of a weapon development program from concept to stockpile is found in the history of the Army's battle group atomic de-

livery system, popularly termed Davy Crockett.

The AEC informed the Department of Defense that design of a small, rugged, lightweight nuclear warhead might be possible. DOD was interested in the military application of this idea. Both the Army and the Marine Corps needed such a weapon as Davy Crockett, while the Air Force saw in it a possible candidate for use in the Falcon GAR-11 air-to-air missile.

Technical feasibility studies were authorized and a committee made up of representatives from DASA, the AEC and the Services examined such parameters as dimension, weight, yield, cost, time scales and inter-program effects.

The Army-sponsored study concluded that the development of a

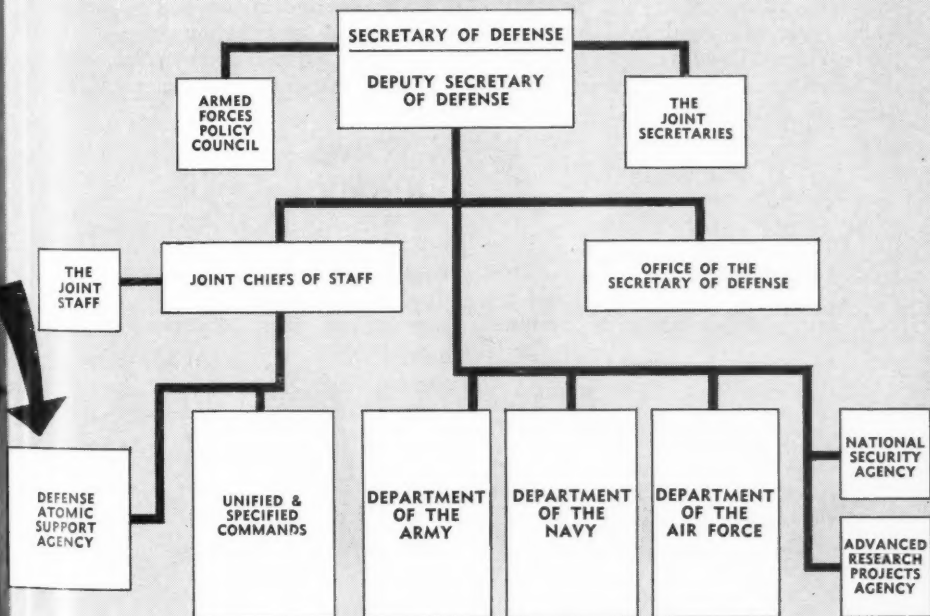
warhead suitable for Davy Crockett was indeed feasible. The Air Force group reported a similar finding in the case of the Falcon GAR-11.

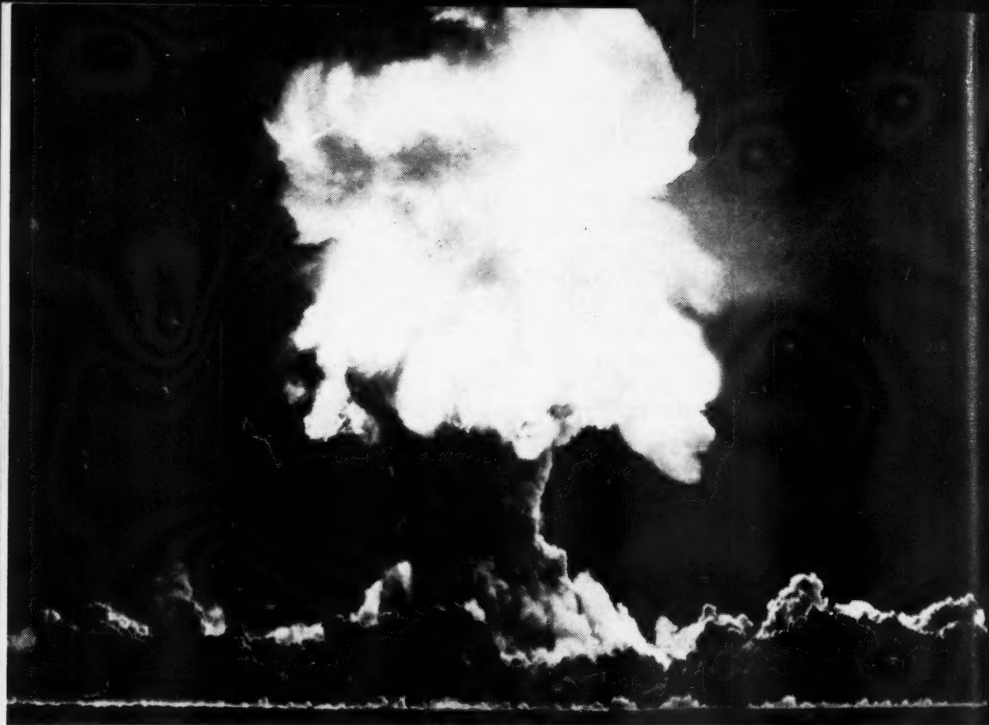
The Army and the Air Force independently approached the Office of the Secretary of Defense for approval of a development engineering program. OSD, with the advice of DASA, decided that the warhead requirements for the two weapons were sufficiently similar that the development of a single warhead would satisfy the parameters of both weapons.

During the subsequent engineering phase, DASA maintained continuous liaison between the Services and the AEC engineers, and drafted the Military Characteristics required of the warhead to be produced by the Atomic Energy Commission.

DASA in Department of Defense Organization

THE DEPARTMENT OF DEFENSE





Rivalling light of early morning sun, fireball from atomic blast lights up the Nevada desert after device suspended from plastic balloon explodes at 500-foot altitude.

Early in the development, AEC wrote specifications for the warhead, which were examined by DASA and the Services, to insure compliance with the required Military Characteristics. Based on DOD's quantitative requirements, AEC then began its planning and scheduling for production and delivery rates.

The nuclear capabilities of both the Davy Crockett and the Falcon GAR-11 were born in an AEC laboratory, and developed in parallel by the Army and Air Force in conjunc-

tion with the AEC. DASA was directly involved in the design, development and engineering stages. It monitors the production phase, and is responsible for distribution of the warheads.

Other Functions

IN ADDITION to the technical assistance which it renders to the Services, DASA arranges with AEC and the Services for the orderly dispersal and distribution of atomic weapons and their associated repair



parts. It is responsible for consolidating DOD requirements and for obtaining the release to the Armed Forces of training weapons, test and handling equipment and other atomic materials produced by the AEC.

DASA is responsible for operation of the National Stockpile Sites. It provides technical information and advice to the Services in connection with construction and operation of their own smaller storage sites. It provides basic logistical advice for forces assigned to the field.

In the interests of weapon quality and reliability, DASA coordinates among the Services and with the AEC the planning and scheduling of modification, modernization and quality assurance programs; in addition it periodically performs technical proficiency inspections of Service units.

Responsibility for training policies and procedures, as well as coordination of Service requirements, is vested in DASA's Washington headquarters. Actual training to insure individual and unit proficiency is conducted by the Field Command at Sandia Base.

Instruction includes training in assembly, handling, storage, surveillance, and maintenance of nuclear weapons and test equipment. Safety is stressed as a vital part of every course.

Key officers of all Services are oriented in the military application of atomic energy. Designated officers are instructed in the characteristics and effects of atomic weapons, and in the technical considerations necessary to atomic weapons employment.

At the request of the Services, DASA assists in the preparation of training programs, or may train instructors to supplement instructional staffs.

Training at Sandia

ARMY Ordnance Depot and General Support Units are fully trained at Sandia Base. A typical unit undergoing such training spends thirty-six weeks in classroom and field.

First, the soldier is individually

trained in his MOS specialty. The Training Group then has the task of producing an advanced specialist in nuclear systems for Army atomic weapons. Ultimate goal is to prepare and mold a group of individuals into a unit capable of performing under combat conditions. It must be a completely self-sustaining organization that moves, feeds, and shelters itself under all conditions.

A typical Ordnance Special Weapons and Missile General Support Company has the mission of providing back-up supply support of atomic ammunition in the combat zone. It stores atomic ammunition, insures the maintenance cycle within the Army area, and provides for evacuation of damaged or unserviceable atomic weapons to higher echelon repair facilities. It is responsible for the maintenance of nuclear systems for the Field Army.

Training Phases

FIRST of three rigorous training stages is the fifteen-week "manning" phase, where newly assigned company officers are concerned with incoming personnel and their individual training backgrounds. Qualified enlisted men attend applicable electrical, mechanical, nuclear or calibration schools. Drivers, forklift and crane operators, technical supply clerks, and supply officers receive the latest training in their specific fields. Driver schools also are set up for personnel assigned that secondary duty.

Military policemen—graduates of the Military Police School at Fort Gordon, Georgia—arrive and begin training as the vital security platoon. They develop techniques in spotting and apprehending penetration attempts and other overt or covert acts.

All individuals are welded into teams as the Company passes into the fifteen-week Basic Unit Training phase. Advanced small-unit training, leading to full qualification of all TO&E jobs, is added here. Military

Atomic Weaponry for the Future

subjects, physical fitness and again, safety, are parts of the daily instruction.

Small unit training progresses to operations of the entire company. Classroom study of military and technical theory is backed up by the maximum possible field work.

Supervisors, workable administrative procedures, and nuclear supply capabilities are developed. Officers, working directly with their new organizations, gradually take over the training role from the DASA instruc-

tor who reverts to an "over-the-shoulder" advisor, acting as a critic and inspector.

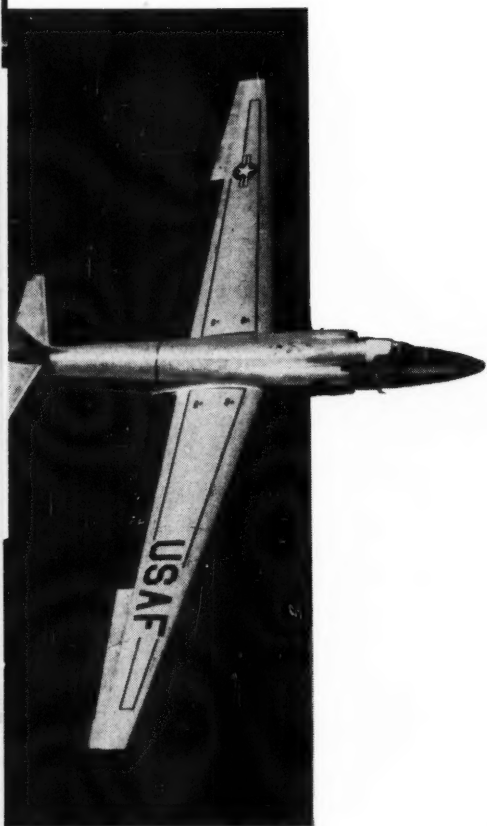
Drills stress training in assembly, disassembly, storage, inspection, testing and monitoring. Courier procedures, modernization techniques and necessary stockpile reporting methods are perfected.

Two weeks before the end of the period, a final proficiency test is given by the DASA Training Group.

A team of instructors checks the organization and demands the per-

DASA's High Altitude Sampling Program

Monitor of the Skies



THE detonation of the first nuclear device over the New Mexico desert on 16 July 1945, and its subsequent use in combat, brought to the attention of the world a term which has become one of the most fright-provoking words in contemporary vocabulary. That term is "radioactive fallout."

Realizing the complexity and seriousness of the issue, and the lack of knowledge associated with it, the Joint Chiefs of Staff in 1954 directed DASA to study and evaluate radioactive fallout on a continuing basis. In 1955 DASA scientists determined that the largest area of uncertainty concerning distribution and concentration of fission products emitted into the atmosphere by nuclear tests was to be found in the layers of air above thirty-five thousand feet. Accordingly, in 1956 a research program was begun, aimed at defining, delineating and collecting samples of the materials contained within this reservoir.

It soon became apparent that manned aircraft could do all that was desired. With the development and availability of the Lockheed U-2 aircraft and a filter medium, of low resistance to air flow but with high collection efficiency under flight conditions, plans were initiated to conduct a High Altitude Sampling Program called Project HASP.

fection of operation expected of a veteran company. This inspection clarifies training deficiencies which are eliminated in the remaining two weeks.

At this point, the Inspector General, Field Command DASA, arrives to give the technical proficiency test. Passing this, the Company moves on to its final phase of training.

Advanced Unit Training involves six weeks of strenuous implementation of all previous work. Full command passes into the hands of the unit officers and noncommissioned

officers. The highest levels of skill and the ultimate in teamwork are developed. Instructors merely monitor and assist the Unit Commander, who prepares all schedules and conducts all training.

Highlight of the period is the field bivouac. Common sense, safety, and knowledge are combined with realism to obtain the greatest practical benefit from the course. During this rugged exercise, the company executes every conceivable action which would be demanded of an Ordnance Support

Necessary agreements for overflight privileges between the United States and other Western Hemisphere countries were concluded and the 4080th Strategic Reconnaissance Wing (SAC) began flying regularly scheduled missions from bases in the United States, Puerto Rico and Argentina along a corridor covering the Western Hemisphere from the Arctic to the Antarctic Oceans.

Over four thousand samples of Strontium 90, Cesium 137, Plutonium and other radioactive isotopes, injected into the atmosphere by nuclear tests, were collected. These samples were and are being examined and evaluated by Isotopes, Incorporated, a contract agency. Other information and samples were sent to the United States Weather Bureau for their study of stratospheric weather phenomena.

Analysis of the samples was made possible by modern low-level counting techniques developed in recent years. Indicative of the efficiency of these techniques, considerable accuracy was realized from the radio chemical assay of one sample which had an activity so low that no special personal safety precautions had to be exercised during its collection, shipment or processing.

Findings and Results

THE HASP program has shed considerable light on the amount of debris stored in the atmosphere and the rate at which it falls out; it has shown that the amount present and the storage time are less than had previously been forecast. HASP

data, which has shown considerable consistency with fallout data collected by various agencies during recent years, indicates that exposure from world-wide fallout from nuclear tests has been quite small when compared to the ever-present background radiation.

During the latter phases of the program, RB-52 and RB-57 aircraft were used for collecting samples at lower altitudes in support of the high flying U-2 operations. This information, correlated with earlier reports, has been made available to the world through the United Nations Scientific Committee on the Effects of Atomic Radiation.

The basic mission of the program—to determine the role of the upper air in world-wide distribution of radioactive debris emitted by nuclear tests—has been fulfilled. Its concepts have proven to be sound and, most important, the samples collected have provided the world with an inventory and evaluation of radioactive debris which will in turn aid in better understanding of the significance of fallout recorded over the surface of the earth.

Scientific conclusions derived from the program included this fact: As the result of recent nuclear testing by all nations, the average person will receive from the atmospheric burden of radioactive debris an increase of only two percent more radiation over the genetically significant thirty-year period than man has received from the normal geological and meteorological background sources that have always existed in his environment.

Atomic Weaponry for the Future

Unit under actual battle conditions.

An Aggressor force supplies realism with unexpected attacks, including a simulated A-bomb drop. Constant guerrilla harassment tests the company's defensive ability. Aggressor air raids and artillery fire demand quick moves to alternate positions. Unforeseen missions and deliberately placed malfunctions in test and calibration equipment simulate battle conditions.

The field bivouac is followed by the Army Training Test and deployment to permanent locations.

Safety Measures

NOT ONLY in its training programs, but in every function, a vital concern of DASA is the continuous search for increased safety factors. Even during the developmental phases, DASA assists the Services in developing and establishing safety controls and procedures.

Safety is considered in the Military Characteristics of the proposed weapon, throughout the feasibility studies, and during the developmental cycle, so that safety rules are completed prior to the operational availability date. As the weapon passes from developmental to operational status, a stringent review of its safety regulations is made to insure against any possible nuclear contribution resulting from an accident.

Constant inspection of safety measures is made during logistic movements, defense readiness conditions and storage. Of paramount importance is the indoctrination and training of all personnel engaged in the nuclear weapons field.

From time to time during the operational lifetime of the weapons system, changes or revisions are suggested on the basis of a continuing review of safety procedures.

Further, a safety panel is appointed by each Service to promulgate safety standards and rules for its own systems and those over which it has operational responsibility. Here DASA participates either as a panel member or a coordinating party, within the channel of review, prior to approval by the appropriate higher headquarters.

A tribute to the success of these safety programs is found in the record of the past years. It is significant that not one of the accidents involving nuclear weapons resulted in a nuclear explosion. (For some of the reasons, see "Our Nuclear Weapons Are Safe," page 13.)

Members of the Army, Navy, Marines and Air Force form the military team in the Defense Atomic Support Agency. Together with research institutions, universities and Department of Defense civilians, they work harmoniously in pursuit of more definitive data concerning the nuclear weapons science.

This organization has worked well for thirteen years. It has assured prompt response to Service requirements; it has resolved conflicting interest and has provided the vital centralized management necessary for an effective common effort. As a result, potential users of nuclear weapons are guaranteed quality and reliability in a wide selection of weapons.

Safety measures call for great care in moving warhead. Packed in container, warhead is lashed in truck.



***Closely guarded
controls over the implosion process
help insure that***

Our Nuclear Weapons Are Safe

WITH the introduction of such Army weapons as the Corporal, Lacrosse, Honest John, Little John, Davy Crockett and others with a nuclear capability, one of the first questions raised is—"What are the chances of a nuclear explosion as a result of an accident involving one of these weapons?"

The answer: Essentially negligible—one in a trillion!

The record is perfect. After fifteen years of storing, transporting, flying, overhauling, modifying, inspecting and otherwise working on and with nuclear weapons, the nuclear component has never contributed to an accident, or to resulting injury or damage.

To understand why this is so, it is important to delve into the basic nuclear physics involved. In the first place, unlike conventional explosives which derive their sensitive properties from their chemical make-up, a nuclear device must be specifically designed to bring about an explosion. Let us examine the process of nuclear fission and the chain reaction which it makes possible.

Insuring Weapon Safety

THE cardinal principle in warhead and delivery system design is to deny

a nuclear yield of any amount other than at the time and in the place intended by the ultimate user of the weapon. The problem of weapon safety is greatly increased by the fact that human beings are involved throughout the life of the weapon.

Four basic problems—ACCIDENTS, DELIBERATE ACTS, HUMAN ERROR and SECURITY—led to the establishment of four safety standards, each designed to cope with a specific problem. The first states, "There will be positive measures to prevent weapons involved in accidents from producing a nuclear yield." This standard must be met by the designer and the military Service before any nuclear weapons system can be used.

The designer provides high assurance that there will be no nuclear reaction, no fission, if the high explosive element of the bomb is set off by fire or shock. In storage, the source of electric power to trigger the explosion is removed or isolated. In other configurations, a system of unique switches assures that the circuit is interrupted between the battery and the nuclear element. Under operational conditions, still other switches provide a positive means of interrupting the flow of current.

Our Nuclear Weapons Are Safe

The second standard, which includes safeguards against deliberate acts by saboteurs or knowledgeable psychotics, states "There will be positive measures to prevent deliberate arming, launching, firing or releasing" of a warhead or a missile when mated to the warhead. This standard is achieved by the use of ingeniously designed and well-concealed switches, locked and sealed controls, mounted in series but in different locations, thus requiring two or more separate independent actions, sometimes requiring a key or the breaking of a seal. Psychotic impulses are curbed by requiring the presence of two or more equally qualified persons whenever anyone has access to the warhead.

The third safety standard: "There will be positive measures to prevent inadvertent arming, launching, firing or releasing," is derived from the problem of human error. This is achieved essentially by the use of the same devices used to guard against the deliberate arming of the weapon. Locks or seals, for instance, prevent an elbow from accidentally firing or arming a weapon.

Security is an integral part of safety; hence the fourth safety standard: "There will be positive measures to insure adequate security." Physical restraints such as fences or vaults, re-

stricted access, utilizing a strictly controlled pass system, alarm devices, and armed guards are all methods of insuring adequate security. The close screening and investigation of personnel selected for participation in the atomic weapons program is also an integral part of the security program.

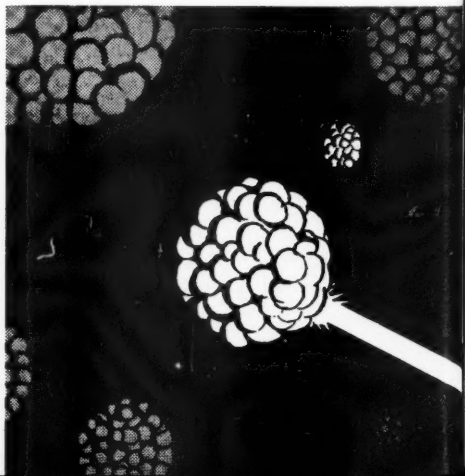
During the design stages of any new weapon system, the safety aspect is one of the prime concerns of the design engineering specialists from the Atomic Energy Commission and the Department of Defense. Early in the development of each new weapon system, a special nuclear safety examining group is formed with the sole purpose of insuring that there will never be a nuclear yield unless our Government intends a weapon to be expended.

A series of safety studies are conducted throughout the development, pre-operational, and operational stages of every weapon. Safety rules are proposed, then given a very extensive and careful review by the Service concerned, the Defense Atomic Support Agency, and the Joint Chiefs of Staff; this is followed by the approval of both the Secretary of Defense and the Atomic Energy Commission. Not until safety rules are finally approved are the Services permitted to operate with a weapon system.

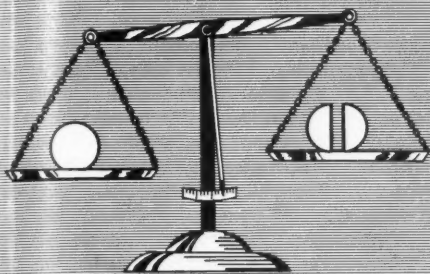
Inside the Nuclear Trigger

WHEN the nucleus of an active material such as U235 or Plutonium is struck by a neutral particle called a neutron, the atom splits or fissions into two parts (right).

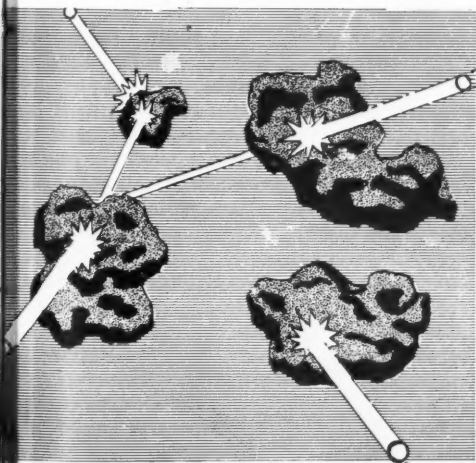
The combined weight, called the mass, of these fission fragments is less than that of the original atom. The lost weight—or more correctly the



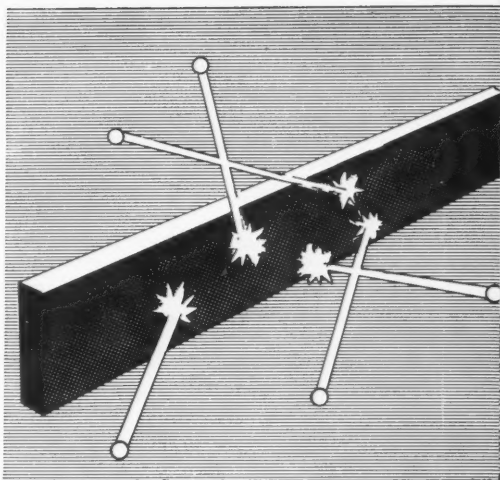
"mass"—has been converted and released as nuclear energy (below).



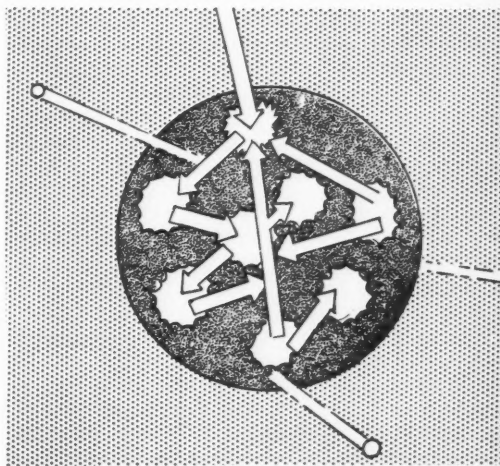
Since stray neutrons are always present in an active material, there are limits to the amount of such material that can be assembled without producing a premature nuclear reaction (below).



If the amount or shape of the active material is such as to permit the neutrons given out by spontaneous fission to escape after only a few fissions, the nuclear mass is "sub-critical," and does not contribute to a nuclear reaction (top right).



If the configuration or the amount of active material is such that one neutron from each fission does not escape, and goes on to fission a new atom, a continuous self-sustaining action known as chain-reaction is created and the mass is just "critical" (below). In order to produce a "super-critical" mass and its resulting nuclear reaction or explosion through fission, the same mass must be compressed and the atoms squeezed tightly together (next page).



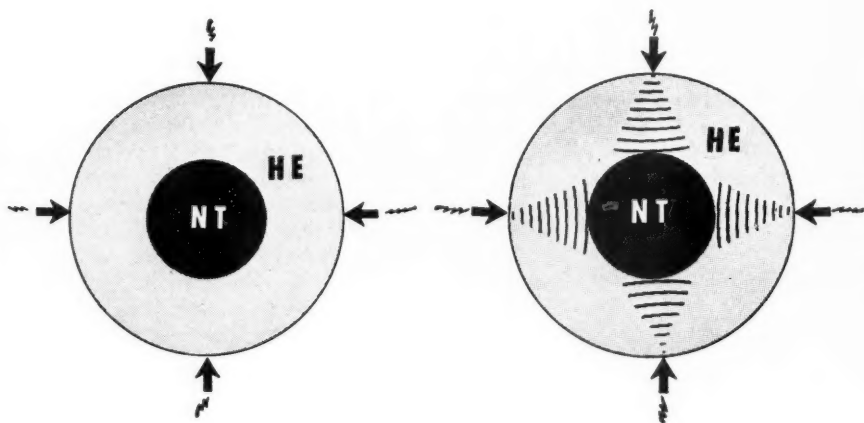
Implosion Explained

THE implosion process required to detonate an atom bomb, by its very nature, has a variety of "built-in" safety features.

Atomic weapons contain various quantities of conventional high explosives (HE). The nuclear component or "nuclear trigger (NT)" may be contained with the high explosive as shown below.

The important thing about fissionable or fusionable material that serves

as the nuclear trigger (NT) is that it must be compressed to reduce its volume. This is done by implosion from the high explosive (HE). In contrast to the outward burst of explosion, implosion is a bursting inward as depicted by the shock waves moving against the NT in the drawing. The wave from the simultaneous firing of the many detonators propagates inward to compress or squeeze the mass of fissionable material.

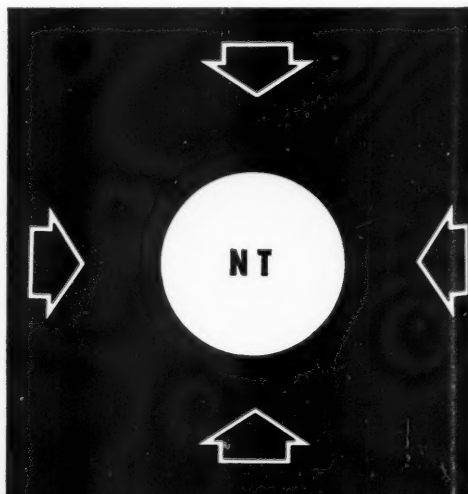


Implosion Technique

THE compression of the active material is accomplished through the technique of implosion.

In the diagram at right the nuclear trigger (NT) is in its normal configuration and its normal density of mass. The imploding wave is moving against it from all points around the periphery of the weapon.

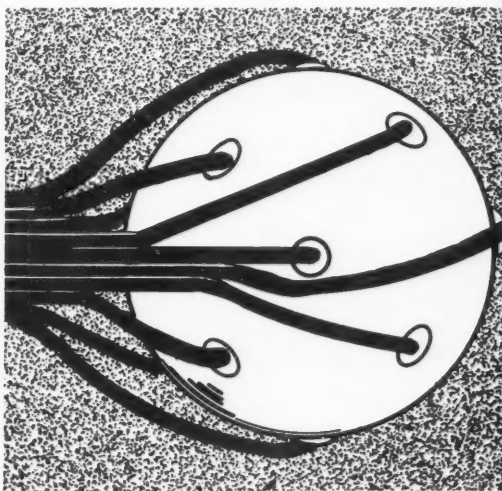
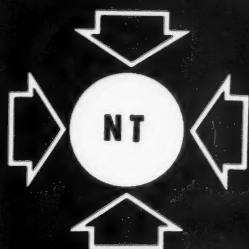
The imploding wave has reached the nuclear trigger (NT) and squeezed or reduced its volume, bringing its



atoms close enough together to sustain chain reaction (below).

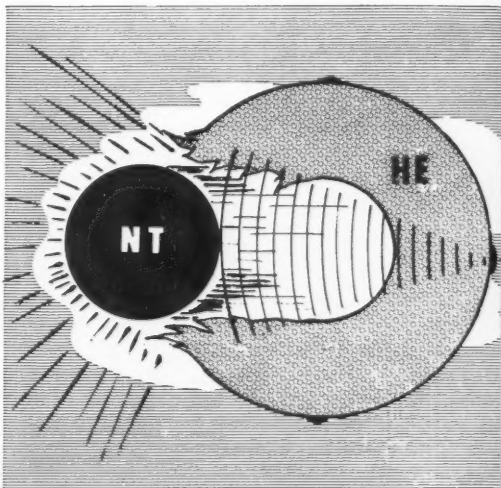
The important thing to remember is that to produce an atomic explosion there must be split-second simultaneous detonation of the explosion charges around the nuclear trigger. To produce this simultaneous action the

surrounding detonators are connected through a series of firing contacts to the electrically powered fusing and firing system (below). In storage, the electric power source is isolated. During other situations a series of switches is used to assure an interrupted circuit until ready for use.



"Built-In" Safety

SHOULD detonation at any single point on the surrounding skin occur from fire or shock as a result of an accident, there would be no release of nuclear energy because there would be no implosion, hence no squeeze to reduce the volume and make the trigger (NT) go super-critical. The wave moving from any point of impact on the surface would seek to escape out the other side impeding it. It would simply release and perhaps scatter the active material, but would not release its tremendous nuclear energy.



**To provide a continuing source
of outstanding young officers
to fulfill essential Army missions**

ARMY



LOOKS TO

"The subject which is under consideration involves nothing less than the procurement of an extremely important portion of the leadership of the national security effort."

THE speaker was General Lyman L. Lemnitzer, then Army Chief of Staff, addressing a meeting of the Reserve Officer Training Corps (ROTC) Panel, which includes leading educators and Army Staff officers. The subject under consideration was a series of proposals advanced by educational institutions, by the U. S. Continental Army Command, and by several Army General Staff agencies, to establish

certain modifications in the Reserve Officers Training Corps courses conducted at the Nation's colleges and universities.

As a result of this consideration, other studies over a period of time, and a recent agreement between Army and Air Force representatives, modifications will be established in the nation-wide Army and Air Force ROTC Program.

A basic course providing for 150 military contact hours has been agreed upon by both Services. This revised basic course has been approved by the Secretary of the Army for implementation in the Army ROTC beginning with



THE FUTURE

Major General Frederick M. Warren

the school year 1961-62. Schools which felt that the urgency of the situation warranted it were authorized to implement this revised basic course during the current academic year.

Basic Course Revised

THE revised basic ROTC course will fulfill the statutory requirement for 180 hours of instruction through 150 military contact hours and through the substitution of a university-taught course of at least 30 hours in the previously prescribed areas of substi-

tution for the Advanced Course—i.e., Effective Communication, General Psychology, Science Comprehension, and Political Institutions and Political Development.

Certain inherently military subjects, such as crew-served weapons instruction, will be taught only during the six-week summer camp period normally attended between junior and senior years.

It is proposed that the 150 military contact hours be presented through 60 hours instruction in Military Science

Army ROTC

I (freshman) and 90 hours in Military Science II (sophomore). However, more specific details of implementation are forthcoming from the U. S. Continental Army Command.

These changes in curricula are intended to heighten the broad educational background of cadets; to lighten the on-campus training load on students, particularly those seeking technical degrees, thus making the overall ROTC program more attractive.

The changes are the result of careful study by the Army ROTC Advisory Panel, and reflect the Army's realization of its dependence upon the ROTC as a continuing source of young officers.

Needs and Obligations

AS General Lemnitzer pointed out, "One fact stands out above all others when the ROTC program is considered. Our present system of building our officer strength in all components of the Army depends heavily upon the ROTC. The U. S. Military Academy, the Officer Candidate Schools, and the direct commissioning method fall short by some 14,000 men annually of providing the yearly requirements for second lieutenants."

Despite this manifest need for the ROTC program, the question of compulsory versus voluntary service has recently become a subject of debate. It must be remembered that schools make their own decisions as to whether to participate in the ROTC

program and whether freshmen and sophomores are required to enroll or simply volunteer.

The majority of Land Grant colleges have a compulsory program. In the 1800's when the Land Grant schools were first established, the Congress required only that they "offer" courses in military tactics. The governing bodies of most of the 168 colleges in this group believe that they have an obligation to require service, recognizing the overall soundness of the program, and its importance to the Nation.

The latest modifications in the ROTC Program are only part of the Army's constant search for ways and means to improve both its attractiveness to the student, and the caliber of the graduate entering the leadership level of the national security effort.

The Department of the Army's interest in the continuation and improvement of the present ROTC program is pointed toward a twofold objective—to produce qualified junior officers for the Active Army and its reserve components; and to provide, at secondary school and college level, citizenship training and motivation for military service.

To accomplish this, three separate programs have been established—the Junior Division (high school level only); the Military Schools Division presented at military junior colleges and essentially military schools or academies; and the Senior Division,



Major General Frederick M. Warren
Chief, U. S. Army Reserve and
ROTC Affairs
Department of the Army

ARMY ROTC graduates on active duty currently include eight high ranking general officers.

When General Herbert B. Powell, Commanding General, U.S. Contintal Army Command, recently was promoted to that rank, he became the fourth ROTC graduate on active duty to achieve the rank of full general. The others are General George H. Decker, Army Chief of Staff; General Isaac D. White, Commander in Chief, U.S. Army, Pacific; and General Clark L. Ruffner, U.S. Representative to the Military Committee and Standing Group, NATO.

Besides these, four Army ROTC graduates on active duty have achieved the rank of Lieutenant General. They are Lt. Gen. Ridgely Gaither, Commanding General, Second U.S. Army; Lt. Gen. Robert W. Colglazier, Jr., Deputy Chief of Staff for Logistics; Lt. Gen. Edward J. O'Neill, Commanding General, First U.S. Army and Army Member, Military Staff Committee, United Nations; and Lt. Gen. John A. Dabney, Deputy Assistant Secretary of Defense (International Security Affairs) for Disarmament and Military Affairs.

presented at four year degree-granting institutions.

All three of these programs are important, particularly since the Army's need for qualified junior officers is increasing, rather than decreasing. Since the Senior ROTC program is the primary source of officer procurement for the reserve components, and one of the major sources for the Regular Army, the program must be so geared that it will not only maintain but even increase its output if required.

Junior Division

THE Junior Division of the Army ROTC Program is established at high school level only, and is available for schools that do not meet the requirements for other types of ROTC units. This program consists of a basic course of military instruction presented during the last three academic years of high school.

The student who completes the three-year course has received elementary training which will benefit both himself and the armed services should he be called to military duty. He has completed sufficient military training to make him eligible for exemption from the first year of basic training should he continue on into college and

pursue the Senior ROTC curricula. The Junior Division Program is presented at 258 schools with an enrollment of about 59,000 young men.

National Defense Corps

THE National Defense Corps of Cadets (NDCC), while not actually one of the ROTC programs, is Army-sponsored and very similar to the Junior Division. This program is presented also at secondary school level only. The major difference between NDCC and the Junior Division is that NDCC is virtually self-supporting. A very limited amount of equipment and tests is supplied to schools that sponsor NDCC units. There are no Active Army instructor personnel assigned or attached to NDCC units.

Military Schools Division

THIS includes two types of units, the Military Junior Colleges (MJC) and Military Institutes (MI). The purpose of the MJC is to provide military training leading to qualification for a commission in the Active Army or the Army Reserve. There are nine MJC units located at essentially military schools which provide high school and junior college instruction but do not confer baccalaureate

Army ROTC

degrees. In all, there are 4,240 students enrolled in the MJC Program.

The MJC course of instruction meets all military training criteria of both the basic and advanced senior training program including attendance at summer camps. An individual who completes the MJC ROTC curricula, and subsequently is awarded a baccalaureate degree following two years of study at a senior college, is eligible for a commission in the Army.

Military Institute (MI) units are established at essentially military schools providing secondary level instruction. These schools meet the military training requirements of the basic course of the Senior Division. A cadet who completes the course of instruction offered in a Military Institute is prepared for participation in the Advanced Course of the Senior Division.

Thus, if a student has completed the MI course he may be excused from participation in the Basic Course if he pursues his education in an institution of higher learning. The

MI Schools Program is presented at 31 schools with an enrollment of about 10,000 men.

Senior Division ROTC

THE mission of the Senior Division ROTC Program is to produce an individual fully qualified for a commission. Presented at 246 colleges and universities throughout the United States, the program is geared to produce an average of 14,000 junior officers per year. Of these, approximately 1000 are commissioned in the Regular Army with the remainder being tendered Reserve commissions.

One hundred and sixty-eight of the schools sponsoring the Senior Division Army ROTC Program have required military training. This means that male students are required to complete the basic two years of instruction.

Purpose of the basic course is to prepare the student for participation in Advanced ROTC and to provide valuable citizenship training. This is accomplished by teaching him the fundamental principles of military

Author presents William Randolph Hearst National Championship Trophy to Cadet Lt. John M. Richards, captain of the winning Randolph-Macon Academy Rifle Team.



Assistant Army Secretary Hugh M. Milton II presents cup to V. M. Danielsen, captain of his school rifle team.



training, to motivate him for additional service and to give the military authorities at the institution an opportunity to determine his potential value to the Army as a leader.

Enrollment in the Advanced ROTC Program is elective on the part of the student and selective on the part of the Professor of Military Science and college authorities, who judge the student's previous performance, leadership ability and estimated potential value to the military service. Once having been selected for and agreeing to take advanced training, the student signs a contract to accept a commission if offered, and to fulfill his active service obligation upon graduation.

The Senior Division Program is presented in two different curricula—General Military Science and Branch Material.

General Military Science (GMS) is the more flexible of the two. As the title implies, GMS presents those general subjects common to all branches of the Army. Upon successful completion, the student is commissioned in a branch based on his education qualifications, the requirements of the Army, and his personal desires. The trend today has been to

encourage the majority of colleges and universities to present the GMS curricula. Approximately 80 percent of the schools offer this program.

The Branch Material curricula offer instruction pointed toward one of the specific branches of the Army—i.e., Armor, Artillery, Infantry, Signal, Ordnance, Engineers, and others.

A major requisite of the Advanced Course is the successful completion of a six weeks summer training camp period. This training period, normally taken between the third and fourth year of school, allows practical application of classroom instruction and includes military subjects that cannot be presented on campus.

During the Advanced Course a student may be designated a Distinguished Military Student (DMS). To become a DMS, he must have demonstrated outstanding traits of character and leadership. The DMS group is selected by the Professor of Military Science. About 25 percent of the students enrolled in the Advanced Course are so designated. If the DMS maintains the prescribed high standards through his senior year, he is designated a Distinguished Military Graduate and offered a Regular Army commission.



ROTC cadets stage bayonet charge at Fort Lewis, Washington, as part of summer training program which provides students with intensified practical field work.

The graduate tendered a Reserve commission may serve his obligation in one of two different ways, depending on requirements of the service and his personal desires. He may be called to duty with the Active Army for a period of six months and will have remaining a 7½-year active Reserve obligation to fulfill; or he may be placed on duty with the Active Army for a two-year period, in which case he will have an additional four-year Reserve obligation to fulfill.

Flight Training Program

THE Army ROTC Flight Training Program was authorized in August 1956. It is designed to motivate college students to seek a career in Army Aviation, to screen applicants for further Army Aviation training, to act as a career incentive for the Regular Army and to create a pool of qualified pilots who could be utilized in event of a national emergency.

The success of this program has

been due in part to the wholehearted cooperation of the Federal Aviation Agency and approved civilian flying schools located at or near educational institutions presenting the Senior Army ROTC Program.

This program is an extra-curricular activity. It is in no way a substitute for the regular ROTC program, and does not alter the officer-producing mission of the Senior Division.

A standardized FAA approved flight instruction course is presented. In order to participate in this program the student must, among other requirements, agree to serve a minimum of three years with the active military force.

From a modest beginning in 1956, when 25 educational institutions participated and 202 students successfully competed the course of instruction, the Flight Training Program has expanded until during school year 1958-59, a total of 66 colleges and universities presented the training, with

Sand tables and other training aids are used to help clarify tactical problems, as in Notre Dame ROTC class.



475 successful completions. At the beginning of the school year 1959-60, some 453 students were enrolled in the program.

The caliber of instruction and the thoroughness with which it is presented is attested by the fact that of 475 ROTC Flight Training graduate offi-

cers attending the Army Primary Flight Training School, a total of 433 have been graduated with only 42 eliminations for all causes. Thus it would appear that the value of the program as a screening vehicle is well worthwhile. Cost of Flight Training for one cadet is about \$535.

A spring noonday sun casts dramatic shadows as the drill squad from Purdue University marches and countermarches in display of skill in Pentagon courtyard.





Major Leo C. Harmon, PMS&T at University of Mississippi, aids pair of cadets who are studying military subjects.

Morale and Leadership

SEVERAL outstanding local and national organizations, and competitions providing social as well as competitive contacts among students, help to enhance interest, morale and leadership training in the Senior Division Program.

Among these activities is the Pershing Rifles, which began as a local

club at the University of Nebraska in 1892 under the sponsorship of then Second Lieutenant John J. Pershing, later General of the Armies. He was at that time the instructor in military science and tactics.

The group was first known as the Varsity Rifles—a designation which was changed to Pershing Rifles in 1894. Its objectives are "to encourage,



Field training gives authenticity to classroom studies of ROTC cadets.

preserve and develop the highest ideals of the military profession, to promote American citizenship, to create a closer and more efficient relation, and to provide appropriate recognition of a high degree of military ability among the cadets of the several senior ROTC units."

Scabbard and Blade is another of the prominent national military societies. This society, founded at the University of Wisconsin in 1904, has a fourfold purpose—to raise the standard of military training in American colleges and universities; to unite in closer relationship their military departments; to encourage and foster development of the essential qualities of good and efficient officers; and to promote intimacy and good fellowship among the cadet officers. Active members are chosen from the cadet officers and other members of the Advanced Course in military training.

In addition to these prominent national organizations, a number of local and regional organizations sponsored by different schools add impetus to the program at the local level.

The Hearst Rifle Trophy is an example of the annual awards presented to ROTC students. This trophy, a 17th Century Spanish flintlock carbine, in blunderbuss style, inlaid with ivory and mother-of-pearl, is awarded to the ROTC student making the highest score in the National Trophy Individual Rifle Match, provided there are at least 20 such students competing in the match.

The Intercollegiate Trophy was provided by the National Board for the Promotion of Rifle Practice in 1958. This trophy, a beautifully embossed antique silver urn, is awarded to the highest scoring ROTC student, cadet or midshipman from any of the service academies in the National Trophy Individual Pistol Match.

In addition, many competitive awards are presented each year by organizations, colleges and universities which maintain a vital interest in the

promotion of excellence in the ROTC Program.

WHILE there are many unresolved problem areas connected with the Army ROTC program that require continuing attention, civilian educators as well as the Army staff are aware of these problems and are taking active measures to resolve them.

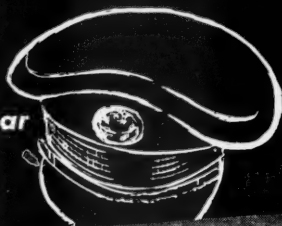
Meanwhile, it is apparent that the Army ROTC Program as presently constituted is accomplishing its mission of providing its quota of qualified junior officers, and of providing citizenship training and motivation for service.

It is also apparent that this vital program—which in the words of General Lemnitzer "involves nothing less than the procurement of an extremely important portion of the leadership of the national security effort"—deserves increasing understanding and support by all Americans.



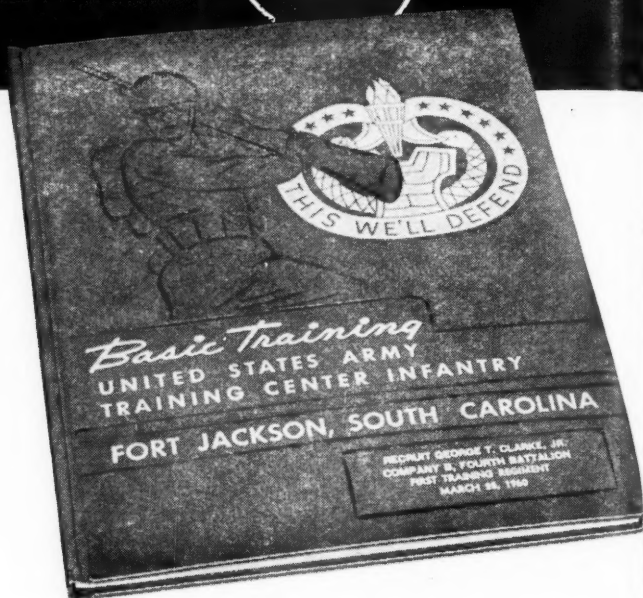
Cadets are trained as future leaders

The Army image is sharp and clear
when the commander employs



The Military Album

as an
Information
Tool



Major General Christian H. Clarke, Jr.

AT FORT JACKSON, South Carolina, the cherished class album and yearbook of high school and college days has been adapted to serve a multiple purpose—as a memento for trainees and visiting dignitaries, as an honor award for certain schools, and as a preview of Army life for prospective Army members.

Class albums and yearbooks in themselves are nothing new. Generally, they are produced by commercial concerns on a concession basis, and are sold as souvenirs to the individuals concerned. A high potential demand exists for this type publication, particularly in training centers where

there is a large and constant turnover of personnel. At Fort Jackson, the familiar format and idea have been retained, but the publication has been adapted to serve as a valuable information tool.

For Distinguished Visitors

LIKE most Army posts, Fort Jackson has many visitors, including national and foreign dignitaries. Following a tour of the post, each is presented a copy of the album with his name and title embossed in gold lettering on the cover. Inside, affixed to the first ten blank pages, are a letter expressing appreciation for the

visit and photographs taken during it. The remaining 64 pages contain a pictorial review of Basic Combat Training. Because of their personalized touch, these albums are always well received.

Honor Award

DURING the latter part of the Basic Combat Training cycle, an "Outstanding Trainee" of each company is selected by the cadre. The young man thus selected is presented a certificate of achievement during battalion graduation ceremonies. An album imprinted with the trainee's name and organization in gold, and containing a captioned photograph of him receiving the award, is then mailed to his former school for inclusion in the library. An accompanying letter to his principal or dean explains the award.

This "grass roots" recognition of the trainee's achievement is particularly appreciated by the various military academies and schools which conduct ROTC programs, as well as by other colleges and universities, as attested by innumerable letters of appreciation from presidents and deans.

Preview of Army Life

WITH each successive issue, any surplus copies are turned over to the Post Information Office without charge. These are mailed to the larger high schools in the Second and Third United States Army Areas which have

not been presented an album under the "Outstanding Trainee" program.

At their leisure in the school library, prospective Army applicants may scan over 200 photographs of activities at Fort Jackson. Short captions and explanatory paragraphs, written in concise, bright language, deliver the message. Since the album mentions and pictures individuals currently on active duty with the Army, the impact is far greater than that obtained by an impersonal brochure.

Multipurpose Album

USUALLY, albums of this type are published on a one-time basis. Photographs of individuals, facilities and activities are collected and assembled into one album, and with each new issue, the process is repeated. This practice is so expensive and time-consuming that the commercial firm must either mark up the price (which cuts into sales) or hold the content of the album to the bare minimum in order to realize even a modest profit. To insure maximum sale, the price per album should be kept well below \$5.

Content should include several color photographs, appropriate captions, and comprehensive coverage of activities. Excessive verbiage and technical terminology should be eliminated.

A minimum of 24 pages, exclusive of individual close-ups, will generally be needed for a successful album. Another eight pages are usually necessary for scenes of company level



Major General Christian H. Clarke, Jr.
Commanding General,
U.S. Army Infantry Training Center
Fort Jackson, South Carolina



Personalized copy of album goes to visiting dignitaries, as author makes a presentation at Fort Jackson.

activities. In view of this, most albums are published on a battalion or battle group size basis. This is more economical but not necessarily the most desirable solution. A higher percentage of receptivity is obtained when the album pertains specifically to the company level.

At Fort Jackson, the solution takes the form of an album with two distinct sections—a “static” section whose contents remain comparatively unchanged, and a “Company” section which changes with each new unit.

The static section contains 10 color and approximately 200 black and white photographs. Included are a history of Fort Jackson, views of various training, educational, recreational, and off-duty activities. In keeping with the slogan “Go Army and Grow,” there are seven pages which portray growth through job training, travel, education, character guidance and leadership.

The company section contains a 1¼ by 2¼ inch close-up of each member of the unit as well as photographs of the training cadre. Since this picture is usually the trainee’s first photograph in the Army uniform, a majority of the trainees order additional prints for their friends and relatives.

By including ten blank pages with the static section, the album becomes

a handsome brochure—a “class album” for trainees and a memento for visiting dignitaries. Bound in a sturdy and attractive leatherette cover, the Fort Jackson album may be purchased for four dollars. Over 90 percent of the trainee personnel purchase the albums. Approximately 40,000 copies are distributed annually.

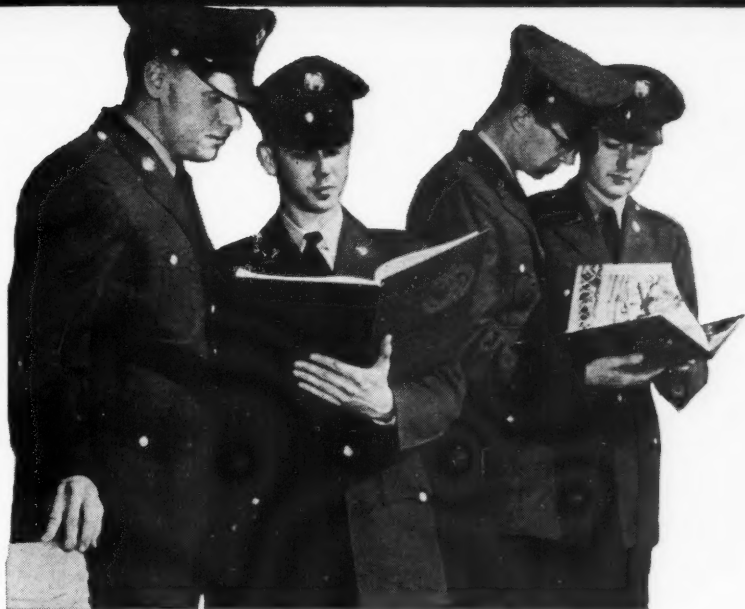
Revising the Album

ELIMINATION and addition of certain training subjects, the introduction of new equipment, and changes in training methods or doctrine necessitate continual review of the contents.

However, too frequent revision should be avoided. One military agency should be delegated responsibility for pictorial and editorial content and all suggestions and recommendations channeled through that agency, usually the Post Information Office.

For economy reasons, major revisions of the static section at Fort Jackson are limited to two a year, to provide a “summer” and a “winter” issue in which personnel will be wearing uniforms appropriate to the season.

Wherever possible, the publication concession should be granted to a local photographic and publishing concern. This contributes to local



Soldiers who go through basic combat training at Fort Jackson find that the album giving a pictorial review of their experiences is of lifelong souvenir interest.

community relations, at the same time assisting in better understanding between the commercial enterprise and the military agency.

Considering the time and expense consumed in correspondence, shipping and communications costs, and the possibility of late delivery, it has been found that a more efficient operation usually results when the albums are produced by a local concern.

Early delivery is of prime importance in a training center where a delay of one or two days may necessitate mailing the albums to many distant parts of the country. Firm delivery dates should be specified in the contract. At Fort Jackson, the albums are delivered to the men during the last week of basic training.

Album With a Purpose

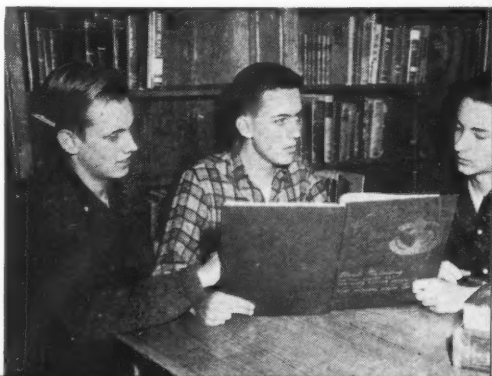
MANY Army personnel today serve a period of six months or two years.

High school students take great interest in reading about friends in albums which are made available in many libraries.

JANUARY 1961

Too often, the only tangible evidence of such service is a discharge certificate and a few fuzzy photographs. A pictorial review album can do much to fill this void.

In the years to come, the albums will serve as treasured mementos of Army alumni. They will be viewed by many people who may have scant prior knowledge of the U. S. Army. Through this medium, the general public will receive a more realistic and accurate image of the Army at the grass-roots level. In cases where the military album can be tailored to serve additional purposes, its value to the U. S. Army as an information tool is worthy of serious consideration.



**At remote missile sites and urban installations alike,
Army Library Service finds that**



**Today's
is a
Read**

Agnes D. Crawford

FREEDOM to inquire and freedom to read are among America's most cherished possessions. In a democracy particularly these are potential weapons which must be protected and defended.

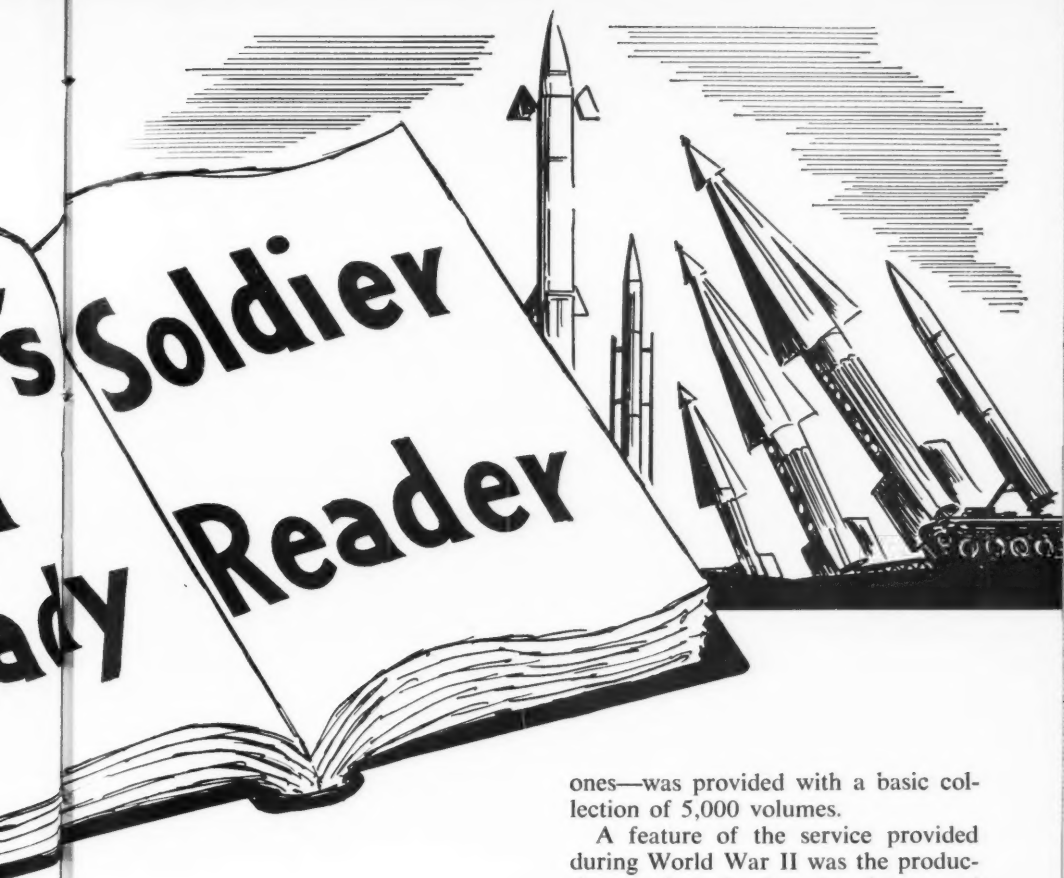
It is a recognized fact that success of the United States Army is dependent upon trained manpower, superior weapons and scientific progress. It is also a fact that success of the Army and continuation of the free society which it defends is, to a great extent, dependent upon the dissemination of knowledge and wisdom. Playing a key role in this endeavor, libraries serve the Nation as gatherers, recorders, and dispensers of the most notable and significant writings of man.

A basic responsibility of the Army Library Program is to provide infor-

mation with which to safeguard freedom of the spoken and written word. Today's modern Army, with its complex new techniques and its emphasis on brainpower, has necessitated continuous revaluation and changes in this phase of the Army Special Services Program. As a result, the effectiveness of Army library operations and services is under constant review.

Today many services that were unheard of in library work a few years ago are becoming commonplace. These include providing records for language study, books in foreign languages, facilities for performing lesson studies, and a general tuning of all services to the families of servicemen as well as to the men themselves.

AGNES D. CRAWFORD is Chief, Library Section, Special Services Division, The Adjutant General's Office, Department of the Army.



Since the Civil War, soldiers have asked for and received both recreational and informational books. During World War I, more than 2,000,000 books were shipped overseas by the War Service Committee of the American Library Association, a volunteer organization. In 1939 when Congress began expanding the Army, the Morale Branch of the Adjutant General's Office was charged with expanding the limited peacetime library program to meet approaching wartime needs.

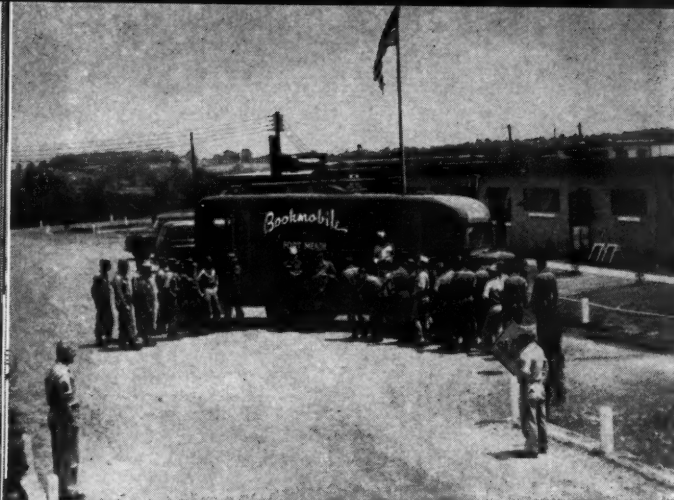
Administrative officers with professional library training were appointed, and funds were made available for purchase of reading material. Each new library established during the war years—by 1944 there were 644 new

ones—was provided with a basic collection of 5,000 volumes.

A feature of the service provided during World War II was the production exclusively for the Army and Navy of paperbound books for troops in transit, in hospitals and in combat areas. All together about 123,000,000 of these books in 1,300 different titles were supplied, with about 90 percent going to the Army. The program, which ended in 1947, was revived during the Korean War.

During World War II the professional staff also was increased, to a peak strength of about 800. Following the war the program of course declined, but new demands for reading material of all kinds—and especially for serious educational material—has brought about the evolution of the Army Library System of today.

THE present-day Army Library Program began to emerge about 1955 when soldiers stationed at gun and



As bookmobile reaches troops at remote installations, soldiers line up to get their favorite reading materials.

missile sites were served from the nearest Army installation library. These isolated units of trained, well-educated men wanted scientific, educational and technical books relating to their jobs.

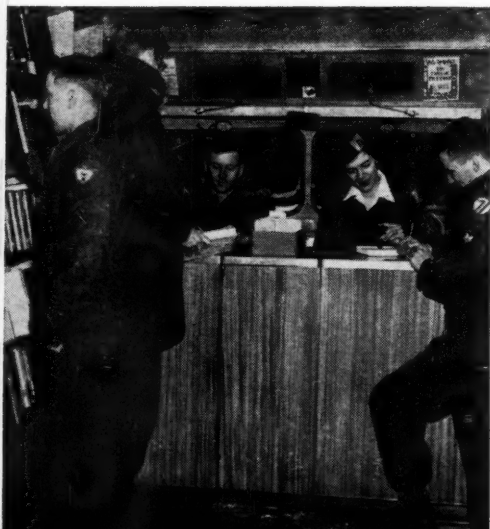
Administrative and operational procedures were adjusted to permit a greater degree of mobility and dispersion. Books and audio-visual materials in wide demand were purchased, and post library personnel were reappointed to meet the changing requirements. Field library deposit collections and bookmobiles operating out of well-established libraries mushroomed into existence. By July 1960 there were 425 small field collections, each containing fewer than 1,000 volumes, and 25 bookmobiles.

This decentralization of services and materials produced new, complex management responsibilities. Training in new library techniques and more efficient library administration was required. Today this leadership and training is provided by the Staff Librarian of the major command.

In addition to services provided at site locations by established libraries, the Special Services Division, Office of The Adjutant General, makes available a monthly paperbound book kit containing 50 titles. This book program is not to be confused with the Armed Forces Edition program of World War II. Books in today's paperbound kits are primarily recreational reading—with sports, hobbies, pure and applied sciences included. The program is designed to augment, not replace, established library service.

Educational Aids

TODAY'S widespread pursuit of education by enlisted and officer personnel has brought other changes to Army Special Services libraries. At present there are 275 main and 166 branch libraries within the Army Library Program. Each of these facilities



Doubling as assistant, driver of bookmobile helps librarian check out books to readers who have made choice.

fulfills a dual function as secondary school library for the soldier student taking high school courses and college library for the man seeking a degree.

In today's post library it is not unusual to find educational reading lists from city public schools, colleges and universities prominently displayed for use of the military student. The task of aiding students in use of Army post library materials is a growing responsibility, and the need for experienced librarians to provide this service is urgent.

Reference materials have been greatly expanded to include authoritative, highly specialized book and nonbook materials such as maps, recordings, periodicals, and newspapers. Study demands have become so important that a few libraries have even enclosed small areas within the library as study rooms.

Libraries Army-wide have and are making every effort to keep pace with this rapidly expanding educational requirement. Civilian school teachers of military students are cooperating by checking the post library's holdings prior to assigning books as collateral reading. Inter-library loan services between post libraries and city, college

and university libraries have been increased, and collateral reading materials in greatest demand are being purchased by libraries whenever possible.

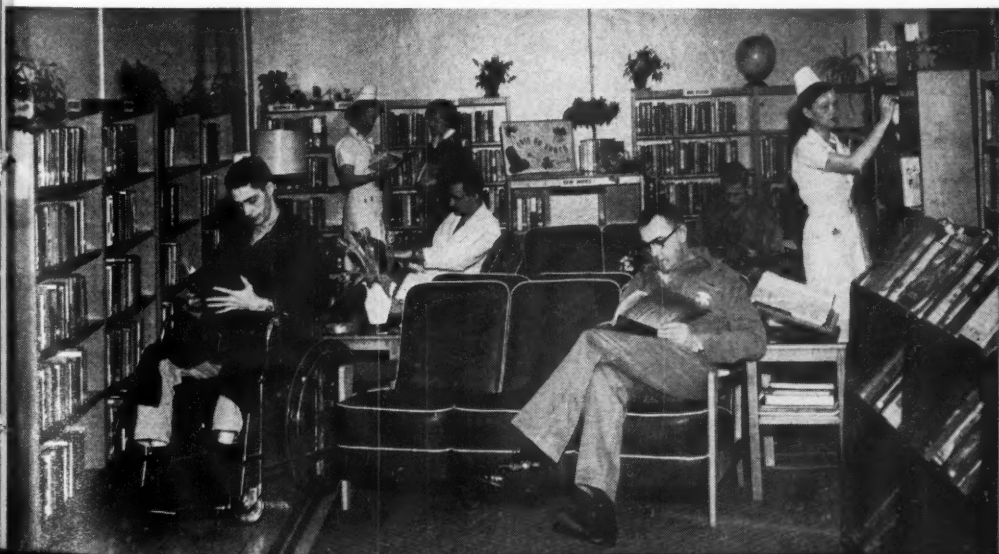
Language Training

ANOTHER facet in this trend is the demand for foreign language materials. Until about five years ago, most libraries had only a few language records, primarily German and French. With Army Language Schools graduating approximately 2,000 students each year and large numbers of Army personnel taking correspondence or local courses in foreign languages, the impact is being felt by libraries. An increasing number of soldier requests are received daily for books, magazines and recordings in a wide variety of European and Asiatic tongues.

To meet the requirements, the Department of the Army last June purchased a limited number of kits, each containing 365 books in German, French, Italian, Spanish and Russian. Sets of recordings also have been placed in key post libraries.

These foreign language books are primarily fiction and popular nonfiction, selected to provide the language student with interesting reading.

Libraries in hospitals in U.S. or overseas, as this one in Nuremberg, Germany, provide recreation for patients, reference material for doctors and nurses.





Permanent-type buildings with modern equipment like the reference library in Sukiran, Okinawa, contrast with Quonset huts in Korea—but books reach everywhere.

Soldiers who may not have these language materials available may arrange interlibrary loans through their local post libraries.

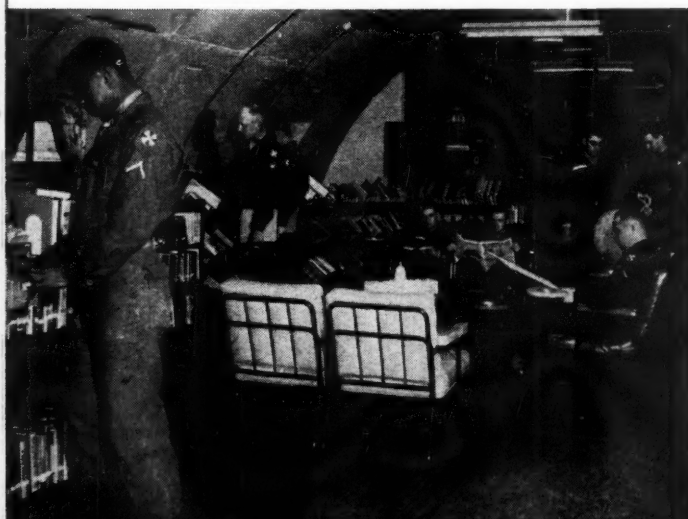
Military Reading Program

PROBLEMS of national defense, international politics and the urgent need for world-wide understanding and respect among nations are uppermost in the minds of the military man. Strategy, in terms of land, sea and air power, and strategy in terms of changing world conditions, must be studied and evaluated. Libraries provide the

soldier the opportunity to explore, to inquire and to appraise today's problems in the light of historical facts and current divergent opinions.

In the forefront of this expanding reading trend is the United States Army Contemporary Military Reading Program. The Office of the Chief of Staff has overall responsibility for this program, and under supervision of the Deputy Chief of Staff for Personnel, The Adjutant General provides the professional direction, supervision and funding.

Every Army library has felt the tre-



Even Quonset hut library like this one in Korea is comfortably furnished, well lighted for readers.

mendous impact of this Reading Program and the resulting desire for additional information on military and international affairs. Many of the larger installation libraries have set aside an entire room for their military science collection.

All libraries, regardless of size, have well-defined areas covering military science, military history and biographies of military leaders. For the most current information in scientific and political fields, the reader must rely upon periodical literature. These materials form an important part of today's reference sources. The larger post libraries retain issues of leading magazines and newspapers for reference use.

In breadth of coverage, the subject fields included in the 1960 Contemporary Military Reading List are both interesting and stimulating. Included are books concerned with the mysteries of outer space, the philosophy and problems of warfare, international relations, and military strategy. (See

"Book List Revised," October 1960 DIGEST.)

In recent years, Army libraries have made great strides in meeting the growing needs of all members of the Army community—the soldier, his dependents and civilians living on post. Libraries are expanding their collections to include music, language and documentary recordings, pamphlets, maps, films, brochures and similar items.

Today's quick-changing world does not allow enough time for many important subjects and events to be covered in book form. Often ephemeral-type material such as leaflets, brochures or periodicals must be acquired to provide current data on scientific advancements and world events.

Whatever the need—whether it be book, pamphlet or periodical for information, education, or recreational reading—the Army Library Service constantly keeps pace with the fast-moving requirements of the Modern Army Soldier.

Large number of scientific works stocked in library in Germany reflects interest in today's Army personnel.



*Historic personages and contributors to Western culture
open the door to wider understanding as the Army sponsors*

Know Your Neighbor— European Style

CEREMONIES in Paris and Bonn last June and in Rome the preceding year marked the culmination of an outstandingly successful People-to-People venture sponsored by the United States Army—the “Know Your Neighbor” essay contest for United States military dependent high school students.

All together, approximately 5000 compositions were submitted from among 10,000 eligible American high school youths in France, Germany and Italy. Panels of American and European educators and public officials served as judges, and millions of Europeans witnessed the award ceremonies through television, films, radio and the press.

Essays dealt with famous heroes of the countries in which students resided, chosen from a list drawn up by Headquarters, United States Army, Europe. All were personages repre-

sentative of their particular country's genius, who had made contributions to mankind which transcended national boundaries. In France, Louis Pasteur, Victor Hugo, Rochambeau, and Pierre L'Enfant; in Germany, Goethe, Schiller, Beethoven, Robert Koch, Carl Schurz; and in Italy, Leonardo da Vinci, Galileo, Giuseppe Verdi, Garibaldi and Enrico Fermi were the subjects.

Each contestant was asked to show why the selected personage was great, how he exemplified the achievements and genius of the country, and finally, the relationship of that individual to American ideals and history. Each essayist thus paid tribute to the national ideals and humanitarian or artistic achievements of the country of residence.

France's Minister of National Education, M. Louis Joxe, personally awarded silver medals to five winners at ceremonies in Paris. The medals, depicting a kneeling figure of Joan of Arc, had been designed by a member of the staff of U.S. Information Service and were especially cast for the occasion by the French Mint. The boys and girls were given a three-day all-expense weekend on the Riviera. The French Government provided free round-trip transportation by jet plane.

Winners in Germany this year received prizes from the Atlantik Bruecke Society. The five top winners were greeted by the wife of the President of



France will continue contest as annual event, known as Joan of Arc Award.

the Federal Republic, members of Parliament and the U.S. Ambassador, and were taken on a three-day tour of Bonn and the castles on the Rhine.

In Italy, the contest in the spring of 1959 culminated in a brilliant ceremony in Rome during which the Italian Minister of Education, Giuseppe de Medici, congratulated winners at widely publicized ceremonies. The national finals were preceded by local awards by mayors and officials in European towns and cities near U.S. military installations.

The success of the "Know Your Neighbor" project in France, Germany and Italy indicates its adaptability to additional countries, wherever large numbers of U.S. personnel and their dependents are stationed. The French participants have indicated they intend to make the essay contest an annual event under the title: "The Joan of Arc Awards."

The project originated and was developed in the Community Relations Branch, Information Division, Headquarters, United States Army, Europe, by Raymond B. Klee, then Plans and Projects Officer. After the groundwork had been laid by the U.S. Army it became a joint project, involving close cooperation at all levels between the U.S. Information Service, the military commands, dependents schools, and European organizations and individuals dedicated to furtherance of international understanding.

Besides its message for Europeans, the "Know Your Neighbor" project carries a message for Americans overseas. In the words of General Clyde D. Eddleman, U.S. Army Deputy Chief of Staff, and former Commander in Chief, United States Army, Europe: "It is both the privilege and the duty of every member of this command, whether soldier, civilian or dependent, to learn to know and appreciate the qualities of his foreign hosts and allies. This can be accomplished through study of the language, history and culture of the people concerned."

JANUARY 1961



A contest winner receives award for her essay on Leonardo da Vinci from Italian Minister of Education Giuseppe Medici.



West Germany president's wife meets group of winners (above) while (below) others get a medal from French Minister of Education.



**"Semper Paratus—Semper Primus" is their motto.
"Geronimo!" their battle cry,
as paratroopers hitch up
and head for**

The Next Horizon



Sergeant First Class Samuel H. Alexander

IN THE C33 droning over a patchwork of Georgia piney-woods and farmland, a group of young soldiers watches tensely as a slim young lieutenant approaches the door, steps out; the static line catches and he floats earthward. Behind him the line of enlisted men moves to the door; the first in line faints; immediately, the

SERGEANT FIRST CLASS SAMUEL H. ALEXANDER saw action during World War II with the 507th Parachute Infantry Regiment in Europe and earned a star on his Combat Infantryman's Badge while with the 187th Airborne Regimental Combat Team in Korea. He is presently assigned to the 506th Airborne Battle Group, 101st Airborne Division, Fort Campbell, Kentucky.

second steps over and follows the lieutenant out the door.

It is 16 August 1940. War clouds in Europe cast their ominous shadow on the United States. As one move toward preparedness for the coming storm, the yet small United States Army has formed the Parachute Test Platoon—and on this day the platoon of two officers and 48 enlisted men make American military history by staging that first jump. Out of this beginning will come a group of men who will help train the thousands who follow during World War II to make more military history.

Today the enlisted man who made



that jump is Master Sergeant William "Red" King, now 20 years older and still a parachutist, serving in the 101st Airborne Division. He has never been anything else but a parachutist and he doesn't intend to change now.

His career parallels and typifies the score of years of history of the airborne troops in the United States Army—an organization growing older with the passing of each year but remaining ever young in spirit—ever ready to test the new and adopt it, while still maintaining a solid footing based on proven military methods and concepts. With 20 years of action and daring



In this picture of original members of the Parachute Test Platoon taken in July 1940, Sergeant William "Red" King may be seen, fifth from left in the center row.

behind them, they look forward with characteristic eagerness and audacity to whatever the future brings.

From Concept to Reality

ONLY 20 years ago paratroopers were unknown in the U. S. Army, although several foreign armies, including both the Russian and German, were already training parachutists. Ironically enough, the training in those nations was largely based on the writings of the American General Billy Mitchell's theories of vertical envelopment—which incidentally had been foreseen much earlier by Benjamin Franklin.

When the U. S. Army got the green light to move ahead, the movement was swift and sure. It started with studies by then Major William C. Lee in the Office of the Chief of Infantry, the War Department. From his investigation of the possibilities of, and requirements for, establishing parachutists in the U. S. Army came a War Department letter dated 25 June 1940 authorizing the Parachute Test Platoon which was established at Fort Benning. It was to consist of two officers and 48 enlisted men.

Lieutenant William T. Ryder, the Platoon leader who made that first parachute jump in which Sergeant King followed, interviewed every volunteer and checked every record. He hand-picked his men. Only one of every six applicants was accepted for that original group. Training began by early July. The first few days were devoted to hard physical conditioning,

with a few hours each day given to acquainting the men with parachutes and other equipment.

Initial training lasted about three weeks, after which the new unit moved to Highstown, New Jersey, to work on parachute jump towers which had been originally developed as a World's Fair attraction. These towers were 150 feet high—not enough for proper manipulation of the chute before landing. When towers were later built at Fort Benning, they were 250 feet tall, which gave fledgling jumpers sufficient height to work the chutes.

This stage of training lasted for two weeks, during which the platoon members not only made static jumps but learned how to pack their own parachutes. The chute was the T-4, and it incorporated a static line to be attached inside the aircraft. The line opened the chute pack as the jumper went out the door.

The first jump for the platoon was scheduled for 14 August but bad weather delayed it for two days. The enlisted men drew numbers from a hat to determine the order in which they would jump. Young Red King had drawn number two position, but as already described, he was to become the first enlisted man in the history of airborne troops to make a jump as member of a U. S. Army airborne unit.

By late September the first tactical parachute organization, the 501st Parachute Battalion, was activated and by October additional volunteers were training under members of the Test

Sgt. King, pioneer paratrooper, adjusts chute of M/Sgt. Paul Huff, first paratrooper to win Medal of Honor.

Platoon who now were parachute instructors. Before the 501st was completely trained, the War Department announced activation of the 502d, 503d, 504th, and 505th Parachute Battalions.

Combat Record

FROM the very beginning the training was tough, rugged. The men—all volunteers—were early indoctrinated with the idea that they were just as tough and rugged as the training. With their highly shined boots that set them apart at a glance, they adopted a swagger and devil-may-care attitude. Later the Germans and other enemies were to consider them as “devils from the sky.”

That “later” was not long in coming.



When 501st Parachute Battalion was activated in September 1940 as first American tactical parachute organization, General Omar N. Bradley attended the ceremonies.





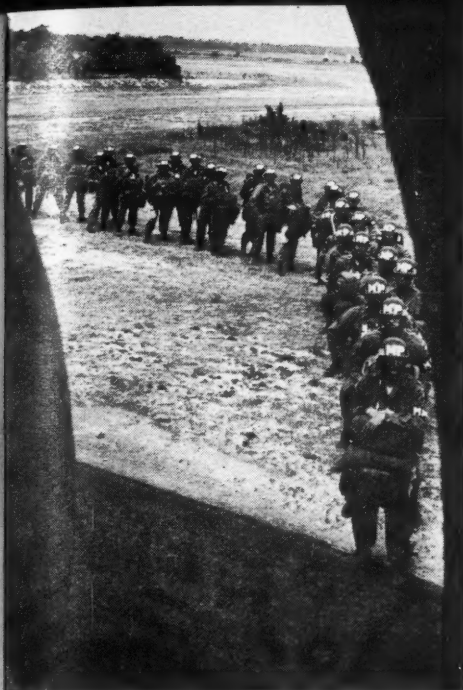
It hasn't changed a great deal in twenty years. Suspended harness training in 1940 was much the same as today.

Ready for a jump in "pioneer" days of 1941, paratroopers wore a sateen-finished coverall, and strapped boots.



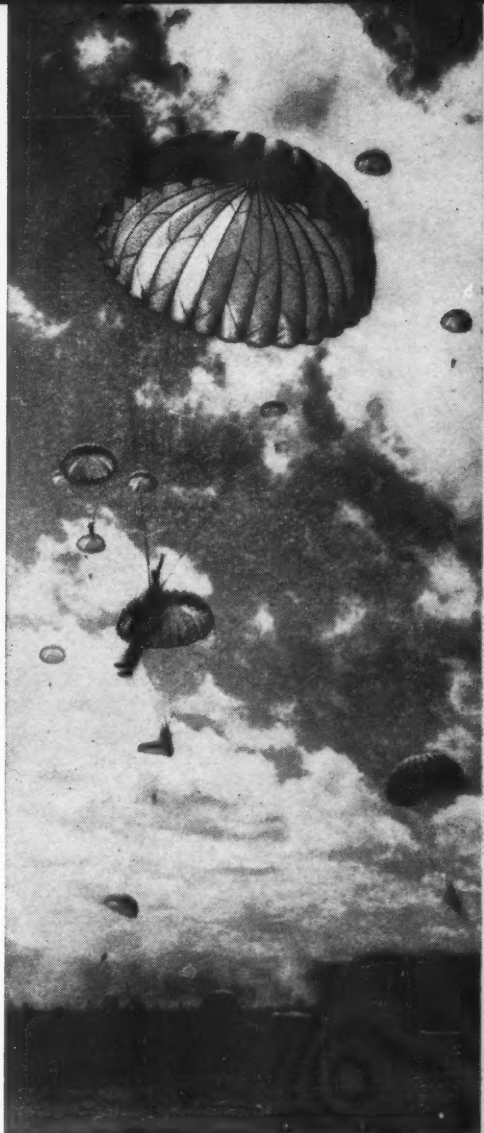
Trooper in training at right was only three years old when his predecessors were lining up for an early jump flight.





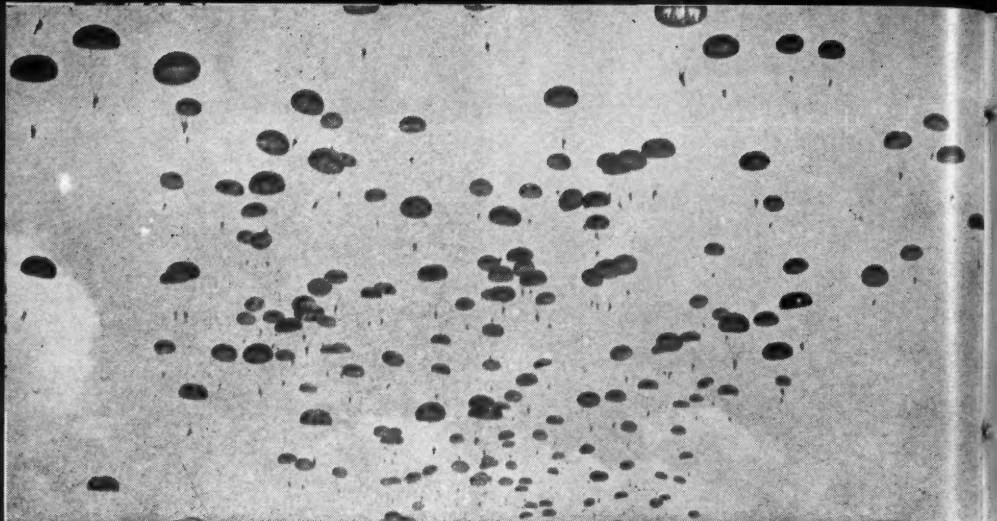
In framework of aircraft door, members of 82d Military Police form in line as they prepare to board plane for a training jump.

Members of 187th Airborne Regimental Combat team land at Camp Hakata, Japan, in 1952 to participate in a formal parade.



During a 1954 exercise, men of the 82d Airborne Division make drop with weapons to seize area at Camp Mackall.





As part of Strategic Army Force ready for action wherever an emergency may arise, 1st Airborne Battle Group, 504th Infantry, stages mass jump as part of training.

Less than 24 months after formation of the test platoon, United States Army parachutists were dropping into combat in North Africa. They blasted the way into Sicily. They jumped at Salerno to bolster General Mark Clark's beachhead. Two full divisions went into France ahead of the main landing force at the Normandy invasion. They were in the van in Southern France. They dropped into Holland to open the way for the

British 2d Army. They jumped into the German camp across the Rhine at Wesel, Germany. They recaptured Corregidor from the Japanese. In Korea they made two important jumps behind Red lines.

Not all their fighting was done as parachutists, either. Fighting as ground troops, they were at Bastogne during the Battle of the Bulge and formed the hinge on which the American armies pivoted to halt the Germans.



On leap into Holland in 1944, some members of 502d Parachute Infantry pull soldiers from a wrecked glider.

Swift Deterrent Force

THE American Airborne never represented a large force. By the end of World War II, there were five airborne divisions out of a force of nearly 100 divisions. Today there are two—the 82d and the 101st—plus two battle groups, one on Okinawa, two in Europe; but the proportion of Airborne troops is much greater than during World War II.

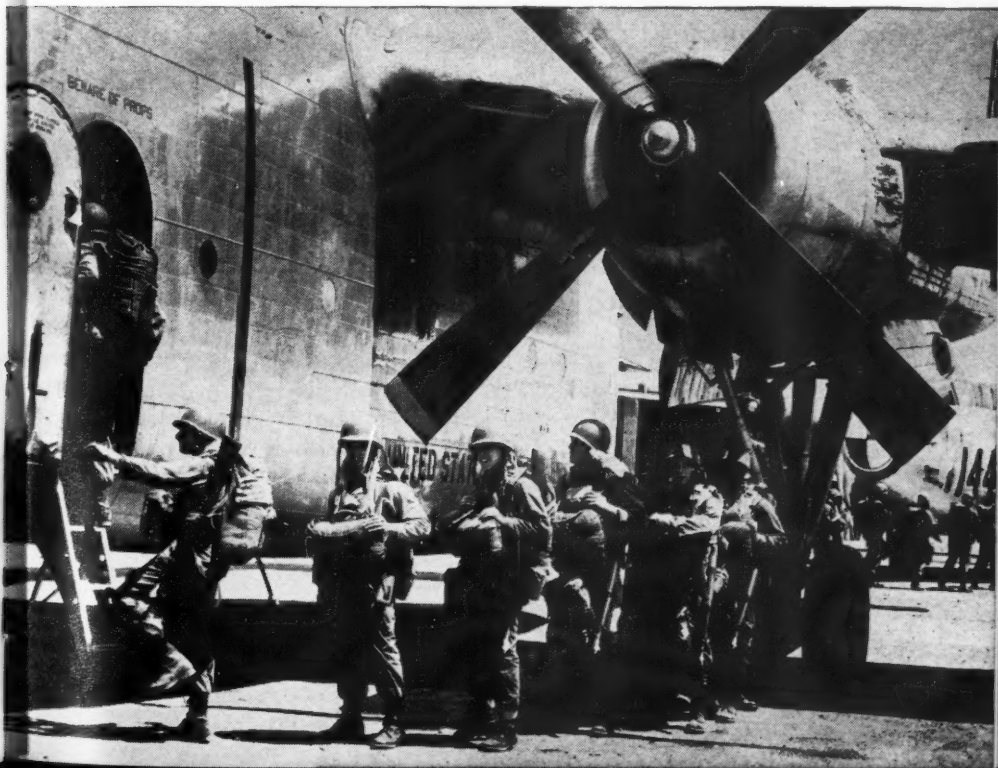
Representing the quick-striking force of the Strategic Army Corps (STRAC), the 82d and 101st Airborne Divisions demonstrate graphically the change in emphasis placed on Airborne troops. Their airmobile character, their high state of combat readiness, typify the tactical operations that may be expected in future warfare with its concept of swift, far-ranging strikes, fast regrouping and general swift movement.

These 30,000 paratroopers are the men who most likely would be first into any combat situation in which the

United States or its allies became involved. Paratroopers of the 101st Airborne Division were rushed into the Caribbean area in 1958. Paratroopers of the 187th Airborne Battle Group in Europe were rushed to Lebanon when trouble threatened there in 1959. The very existence of these troops is a deterrent to the brushfire war threat employed by the Communists.

Today Airborne forces continue the strenuous, dangerous training that will keep them constantly ready. Perhaps the most important compensation for their spartan existence is the calm, almost detached view that they have of the future. They know they will be among the first into battle; they will sustain the first casualties—but they also expect to win the first battles. They know they are members of an organization that never lost a fight. They know the next 20 years can be even rougher than the first 20—but like their fathers and older brothers, they volunteered for a fight, not a frolic.

Members of 187th Airborne Regimental Combat Team, here boarding a C-119 Flying Boxcar, made two combat drops behind lines during heavy fighting in Korea.



***Vital details of the
Dependents' Medical Care Program
are spelled out in this rundown on***



Medicare

**Brigadier General
Floyd L. Wergeland**

ARMY INFORMATION DIGEST

ON 7 June 1956, the President signed into law the Dependents' Medical Care Act (Public Law 569—84th Congress) authorizing medical care for dependents of members of the Uniformed Services. Earlier, in a special communication to the Congress, President Eisenhower had strongly urged enactment of the legislation as one of the most important career incentive proposals to come before the second session of the 84th Congress.

Congress took prompt action on the request. After reviewing and studying the problem, it developed and approved the Dependents' Medical Care legislation, to become effective on 7 December 1956. Medical care from civilian sources was approved as a supplement to medical care available from Uniformed Services medical treatment facilities.

In four years of operation under

Of the monies expended during this four year period, approximately \$132 million (or 49.3 percent) will have been paid to hospitals; \$130 million (or 48.5 percent) to physicians; and \$6 million (or 2.2 percent) for administrative costs. The 1,000,000 cases include about 510,000 deliveries, 90,000 other types of maternity cases (such as complications of pregnancy), 210,000 surgical cases, and 190,000 medical cases.

But these figures tell only part of the story. During these same four years, service hospitals located in the United States and Puerto Rico provided for approximately 1,500,000 admissions of wives and children of active duty men in the Uniformed Services, including about 500,000 delivery cases.

Working together, service and civilian hospitals have provided care in these four years for over two-and-one-

e Up to Date

the Dependents' Medical Care Program it is estimated that, by 31 December 1960, \$270 million will have been expended for approximately 1,000,000 medical care cases provided by civilian physicians and hospitals. In addition, there will be more than 60,000 outstanding civilian hospital admissions for which care has been provided prior to 31 December 1960, but for which billings approximating \$15 million have not yet been submitted for payment.

half million hospital cases—more than one hospital admission a minute since the Program began. Babies delivered total over one million—approximately one every two minutes.

Establishing Eligibility

THE Dependents' Medical Care Program provides certain medical benefits from civilian sources to eligible dependents—lawful wife; lawful husband (if dependent on Service wife for over one-half of his support), unmarried

Medicare Up To Date

legitimate child, adopted child, or step-child under 21 years of age under certain conditions—of those service personnel serving on active duty for a period of not less than 30 days.

"Medicare," as the Program is popularly called, subsequently underwent a major change on 1 October 1958 to include the deletion of certain types of care. On 1 January 1960, the scope of Medicare benefits was broadened through the restoration of most of the categories of care that were deleted during October 1958. The Medicare Permit System established in October 1958 to assure the optimum use of Uniformed Services medical facilities, an objective often expressed by members of Congress, has been retained. Experience has proven this system to be the most satisfactory method of control in attaining this goal.

Wives and dependent husbands and children of Service members, who reside *with* their sponsors and who desire civilian medical care at Government expense, *must* contact a Uniformed Services authority to determine whether the required care can be provided in a nearby Uniformed Services medical facility. If it cannot be provided, the dependent must obtain a "Nonavailability Statement" (DD Form 1251) from the appropriate Service authority in order to have authorized care from civilian sources paid for by the Government.

Civilian medical services, to be pay-

able by the Government, must meet the criteria of authorized care under the Medicare Program. DD Form 1251 does not establish requested care as authorized care, nor does it guarantee payment by the Government. It does serve as evidence that the dependent residing with the sponsor has cleared with the proper Service authority and that the desired care is not available from a reasonably accessible Uniformed Service medical facility.

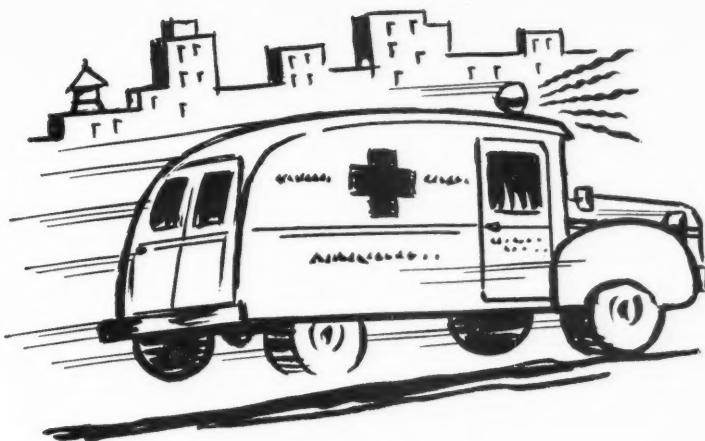
The issuance of DD Form 1251 places the dependent residing with the sponsor in essentially the same free-choice position as a dependent residing apart from the sponsor. *The issuance of DD Form 1251 does not establish the Government's liability for Medicare claims.* This liability is only for care authorized under the Program, and is determined from the diagnosis and from clinical information and/or certification by the attending physician.

A DD Form 1251 may be issued on a retroactive basis to cover completed civilian medical care, when it is determined that the patient could have obtained a DD Form 1251 by applying for it before the care began. A DD Form 1251 issued under these circumstances will bear a statement under "Remarks" that it is retroactive to the effective date.

In certain cases, authorized Government-paid medical care from civilian sources may be provided without DD



Brig. Gen. Floyd L. Wergeland, USA
Executive Director,
Office for Dependents' Medical Care.



Acute emergencies requiring immediate treatment are covered under the Program.

Form 1251, to include the following:

1. Acute emergencies requiring immediate treatment from civilian sources at the nearest available medical facility to preserve life or prevent undue suffering.
2. When the dependent is away from the area of the sponsor's household on a trip, and
3. For maternity care required by an eligible dependent wife whose husband died while on active duty, if she was pregnant at the time of his death.

Each civilian physician and hospital, when providing care for dependents, will furnish the dependent with a Claim Form (DA Form 1863, "Statement of Services Provided by Civilian Medical Sources") to be executed in part by the dependent or accompanying parent. The Claim Form will note that the dependent patient resides with or apart from sponsor which determines the applicability of the DD Form 1251 requirement. If the attending physician requires the services of other physicians, or such personnel as an anesthetist, a physical therapist or a private-duty nurse while the dependent patient is hospitalized, a DA Form 1863 must be completed for each.

Extent of Coverage

WHEN applying for civilian medical care the dependent should first ask the physician if he will participate in the Medicare Program. If he accepts the

"It is significant that the Congress of the United States, in enacting the Dependents' Medical Care Act, stipulated that, 'The purpose of this Act is to create and maintain high morale throughout the uniformed services by providing an improved and uniform program of medical care for members of the Uniformed Services and their dependents. The morale of the soldier has always been the responsibility of the officer personnel, commissioned and non-commissioned. I should like to emphasize that spouses or children of active duty personnel need not go without medical care which can be provided under the Dependents' Medical Care Program. All officers, commissioned and noncommissioned, should acquaint themselves with the provisions of the Medicare Program and insure that all military and dependent personnel of their organizational elements are adequately informed."

Brig. Gen. Floyd L. Wergeland, USA,
Executive Director,
Office for Dependents' Medical Care



"Dependent should ask physician if he will participate in the Medicare Program."

dependent as a Medicare patient, the dependent is not expected to pay the physician, nurse or hospital for care covered under the Program; however, certain prescribed charges remain as a liability of the dependent—e.g., the first \$25 of total hospital costs or \$1.75 per day, whichever is greater; the first \$15 of the physician's charges in the case of outpatient treatment of bodily injuries; and, for private-duty nursing care, when certified as necessary by the attending physician, the first \$100 plus 25 percent of the additional charges.

For authorized care furnished to eligible dependents, the Government will pay the physician's normal charges *not* to exceed the negotiated fee, *unless* his claim is submitted as a special report which is subject to review by the appropriate State Medicare Committee, where such committees have been constituted.

The Committee's recommendations are then forwarded for consideration by the Office for Dependents' Medical Care. In accordance with the full payment principle under which Medicare operates, it is understood that the dependent will not be responsible for any additional charges for the same care for which payment has been effected.

Services Restored

AS a result of a comprehensive review of the operation of the Medicare Program, the following types of care were restored to the Program effective 1 January 1960:

1. Certain Surgery. The treatment of surgical conditions, when medically indicated and requiring hospitalization, is authorized at Government expense. Services of a surgical nature desired or requested by the patient, which are not medically indicated, are not authorized for payment under the

Program. The opinion of the cognizant medical authority (civilian charge physician) will determine whether the services are medically indicated. The patient's desires, socio-economic and/or psychological reasons are not considered factors for determining that care is indicated.*

2. Outpatient Treatment of Bodily Injuries. Payment under Medicare is authorized for the treatment of bodily injuries when a patient is not hospitalized, to include diagnostic and therapeutic tests and procedures authorized by the attending physician. Such care is limited to the treatment of fractures, dislocations, lacerations, and other wounds as prescribed in the local Medicare schedules of allowances. Such bodily injuries as above that are legitimately cared for by dentists, including related diagnostic and therapeutic tests and procedures authorized by the attending dentist, are also payable under the Program.

3. Pre- and Post-Hospitalization Tests and Procedures. Payment is authorized in an amount not to exceed \$75 at Government expense for necessary diagnostic tests and procedures performed or authorized by the attending physician prior to hospitalization for the same bodily injury or surgical procedure for which hospitalized. Also,

*Following are examples of types of surgical care which are *not* authorized for payment under any circumstances:

a. Cosmetic Surgery—Any surgery for improvement or change of appearance or for psychological reasons.

b. Ears—Reconstruction and/or revision of the external ear; surgery based on psychological reasons.

c. Congenital defects of skeletal and/or central nervous system which are readily identifiable as representing chronic long-term conditions and characteristically respond poorly to surgical intervention.

d. Sterilization procedures for multiparity, socio-economic and/or psychological reasons.

e. Procedures designated to correct a state of infertility or sterility.

f. Removal of tattoos.

payment in an amount not to exceed \$50 at Government expense is authorized for necessary tests and procedures performed or authorized by the attending physician for proper aftercare of the same bodily injury or surgical procedure for which hospitalized.

4. Treatment of Acute Emotional Disorders. In-patient care of acute emotional disorders, constituting an emergency, is authorized and payable only



Outpatient treatment may be authorized.

until the acute disorder subsides, until arrangements are made for care at other than Medicare expense, or until the end of 21 days of hospitalization, whichever occurs earliest.

A request for extension beyond the 21-day period will be considered by the Contracting Officer of the Office for Dependents' Medical Care only if made by the Service member, the



Complete obstetrical and maternity care are provided through Medicare service.

dependent, or representative of either, and if it is demonstrated that

a. Due to absence, the Service member was unable to join the dependent in sufficient time to make suitable arrangements, within the 21-day period, for care at other than Medicare expense.

b. No other competent member of the Service member's household was available to make the suitable arrangements.

c. The number of days requested for extension represents the minimum time required to consummate suitable arrangements.

The request should be supported by a statement from the attending physician, that the treatment given or to be furnished, during the time period covered by the requested extension, is for the acute phase of the disorder.

Medicare Services

IN addition to the care restored to the Program on 1 January 1960, the Government will pay the major cost of civilian medical services for eligible dependents who meet the requirements of the Program as follows:

1. Hospitalization in semi-private accommodations normally not exceeding 365 days for each admission; all necessary services and supplies furnished by the hospital during hospitalization; doctors' bills during such hospitalization for the treatment of:

a. Acute medical conditions.

b. Contagious diseases.

c. Medically indicated surgical conditions.

2. Laboratory and X-ray tests and procedures during hospitalization for a condition authorized under the provisions of the Program.

3. Complete obstetrical and maternity care including in-hospital care of the newborn infant. Infants delivered by civilian physicians in a home or an office may receive authorized care they need on an outpatient basis during a period not to exceed 10 days following the date of delivery.

4. Special-duty nursing service during hospitalization.

Points To Remember

Identification. When applying for any kind of medical care—at a Service or civilian facility, or to a civilian physician—dependents are required to present their Uniformed Services Identification and Privilege Card (DD Form 1173) as proof of their eligibility for medical care.

All eligible dependents except children under 10 years of age will receive a card. In some cases, such as a child living apart from his parents, a card may be issued even for a child under 10. In the case of a child under 10, the parent or guardian must furnish proper identification and certify as to the child's eligibility.

Dependents residing with their

sponsors will receive their cards through their sponsors. The sponsor will fill out the necessary application form and submit it to his commanding officer. Sponsors residing apart from their dependents may send the completed application form to their dependents.

If the sponsor is unable, or declines, to fill out the application form, his dependent can obtain the necessary application form at any Service installation, fill in as much information as possible, and submit it to the sponsor's commanding officer for completion and verification.

Dependents of Service members who died while on active duty or while in a retired status can obtain an application for the card from a nearby Service facility by applying there in person or requesting it by mail. Information on how to fill out the form and what certificates must accompany it can be obtained at the same time.

The completed application form must be taken to any nearby Uniformed Service facility. If the necessary equipment to produce the card is not available there, the dependent will be told where to obtain the card. Dependents who cannot visit a Service facility that can issue the card may request it by mail.

The card must be turned in (1) when it expires; (2) when a new card is issued; (3) when the sponsor dies, is discharged, retires, or is released from active duty; or (4) when the dependency status is otherwise ended.

Nonavailability Statement. Dependents residing with their sponsors, in addition to furnishing proper identification, must present a DD Form 1251 to the source of civilian care except under the previously noted conditions and circumstances which waive this requirement.

Participation of Physicians and Hospitals. Eligible dependents seeking medical care from civilian sources should make sure the physician and hospital



There are several points to be remembered.

are participating in the Medicare Program before beginning treatment.

Physician Qualification. A physician participating in the Program must be legally licensed and qualified to prescribe and administer all drugs and to perform all surgical procedures.

Hospital Qualification. A hospital, to qualify under the Medicare Program, except in an emergency, must be engaged primarily in providing facilities for the surgical and medical diagnosis, treatment and care of injured and sick persons by or under the supervision of two or more staff physicians or surgeons. It must also provide continuous 24-hour nursing service by registered graduate nurses.

Medicare Information. Information may be obtained from the commander of the nearest Uniformed Services medical facility or his designated representative. Military personnel should provide their dependents with a copy of Department of the Army Pamphlet 355-200-8, entitled *Medicare Program for Dependents*, which may be obtained through their Unit Commander or Information Officer.

*In peace and war, from muskets to rockets,
the Finance Department makes it a certainty that*

You Can Count On



**Major General
Paul A. Mayo**

WHEN President Thomas Jefferson sent for Captain Meriwether Lewis to lead the exploration of the newly acquired Louisiana Purchase, the captain couldn't be located for some time—he was out with horse, wagon and cash paying off troops in the wilderness.

In those days and for many years to come, the strains of Pay Call did not sound regularly on the first day of every month. At the far-flung wilderness posts, frontier forts, and

during the various wars and campaigns, the bugle sounded the call only when the paymaster arrived. Sometimes that might not occur for several months.

But the troops always got paid and as times changed, as the Nation and the Army changed, as modern business methods were evolved to meet the changes and growth, so Army Finance kept pace. New and changing conditions brought forth new organizational methods and new techniques.

Through the years the Army's financial affairs were administered according to the best practices of the times. Today the Finance Corps not only has adopted the most modern

under supervision of the Paymaster General.

Getting the money to pay troops during the Revolution was a well-nigh impossible task, for the Continental

on Payday

business machines, the latest methods of keeping records, and swifter methods of making payment—it is planning on meeting future needs even before they arise through a program of tests that will insure that financial matters will be geared to the space age.

The story of growth and accomplishment of the Finance Corps is one of meeting difficult conditions, of continued advance in adopting new methods, of keeping pace with ever advancing business and financial methods, of paying the troops in peace or in war. The story is one that affects every soldier who now takes payday for granted, every family that receives allotment checks regularly, the thousands of civilian employees and the many industrial and commercial organizations which deal with the Army.

Early History

IT was on 16 June 1775 that the Finance Service had its origin, just two days after the official birth of the U. S. Army. James Warren, then President of the Provincial Congress of Massachusetts, was named first Paymaster-General. The title gives a clue to the methods of handling finances then and until after the War of 1812. The Paymaster-General was in charge of getting the necessary money to pay the troops. Actual payment was made by line officers—like Lewis—who were only indirectly

Congress had no taxing power, and printed promises to pay were issued. These naturally depreciated rapidly, since there was nothing to back them up. From the devalued paper "money" of the time came the phrase "not worth a Continental" because the promises to pay were issued by the Continental Congress.

This lack of hard cash or its equivalent worked considerable hardship on the troops, and also made it difficult to obtain the materiel of war, clothing and food. That the soldiers of that time fought and won the war is a tribute not only to their patriotism but to their faith in the future.

After the War of 1812 the Pay Department was reorganized. Under the new system paymasters paid the regiments. They usually held the rank of major. The system continued through three wars. During the Civil War more than a billion dollars were paid out to the troops. Payday came when a paymaster reached the unit with his cash box, but by 1896 the Army paymaster could proudly report that payments had been placed on a monthly basis. By World War I payday at a set and certain date was a firm tradition.

Five years previous to United States entry into World War I, the Pay, Commissary and Quartermaster Departments were consolidated under the Quartermaster General of the

You Can Count on Payday

Army. But the necessities of World War I—increased troop strength, increased procurement and so on—meant that the agency could not meet the financial needs of the Army. Accordingly, the position of Director of Finance was created.

Brigadier General Herbert Lord set up the new organization which handled not simply pay and travel costs, but all of the many and varied financial activities of the then War Department—centralized disbursing, auditing, accounting and budgeting. This organization became the permanent Finance Department in 1920.

World War II imposed a greater workload on the Finance Department than even that of World War I. The Department had the enormous task of paying some ten million men and women scattered all over the globe. Frequently pay call sounded amid the sound of rifle fire. Further, allotments to families were introduced, so that at one time more than 8,000,000 checks were being mailed monthly to soldiers' dependents. Workload of the Department was not eased in the slightest by having to deal in many foreign currencies. In 1950 the Finance Department was redesignated as the Finance Corps.

Mission

THE Chief of Finance today has the mission of formulating, coordinating and supervising execution of plans

and policies concerning finance matters. This office is concerned with developing systems and procedures of pay and allowances of the military, and also with civilian pay. It also is concerned with handling commercial account payments, and with issuance of checks, savings bonds, family allotments and the handling of cash generally.

A further mission of the Office, Chief of Finance is to handle preparation and defense of budget estimates and the management of budget programs not only for military pay but for related activities.

Through all these changes and advances, there have been continued improvements in the discharge of the duties of the Chief of Finance. Actually the 1920 reorganization molded the present concept of Army pay service.

With the increased number of entitlements and deductions in the modern pay account, the old methods of making and recording payments had to be adapted to use of business machines. Still, some time-proved techniques had to persist because of their flexibility and dependability under uncertain field conditions.

This last statement throws some light on the differences between handling financial affairs of an organization like the Army and a large business concern. A commercial firm may find little difficulty in adopting new types



**Major General
Paul A. Mayo
Chief of Finance, U. S. Army.**

Preparing departmental financial and budgetary reports is accomplished in Summary Accounting Processing Branch.



of business machines or accounting methods, whereas the Army must be guided by the necessity for paying men in Greenland or the Antarctic, in the Caribbean or Korea, large numbers of men in Europe or small groups in military missions on many continents. It must pay thousands of civilians and it must pay retired members. Obviously the morale factors alone transcend anything comparable in a civilian firm. Under such circumstances, it is often difficult to make rapid, drastic changes.

At the same time, the widely deployed Army has created a need to report more management-type data. More information is needed for preparation of the Army budget. Accounting requirements have grown ever more complex. To meet this need, the Chief of Finance has devised facilities and organizations to perform certain specialized tasks such as accounting, allotment administration and payment, claim settlements, transportation payments, disbursement of retired pay.

The workload in larger offices was such, and the volume was sufficient, that modern business machines could be used with efficiency. Unique systems and procedures were engineered for these special classes of work. Thus the tasks of World War II were met, and technological refinements enabled the Finance Corps to handle the ramifications of vast transactions under difficult conditions in the Korean War.

Machine Methods

AT THE major command levels, and at the Finance Center and the

Finance and Accounts Office, U. S. Army, specialized business machine applications have advanced far beyond the degree of mechanization that exists in military pay sections of field finance and accounting offices. This is largely due, of course, to the fact that complexity of duties in the centralized organizations necessitates mechanization. The volume of work makes use of expensive machinery worthwhile, from an efficiency standpoint.

THE U. S. ARMY FINANCE SCHOOL at Fort Benjamin Harrison, Indiana, trains approximately 4,800 officers, enlisted members and civilians each year in finance specialties. Courses vary in length from 2 weeks to 9 months and cover all aspects of Army finance and accounting from basic to advanced.

The Finance Officers' Career Course is 35 weeks in length and includes instruction in the general areas of Financial Management, Military Comptroller-ship, Staff Finance, military topics, command and staff problems, tactics, and a logistical exercise at Fort Lee, Virginia. This year's class of 36 students was composed of 25 U. S. Army officers and 11 officers from allied nations.

In addition to some 4,800 regular students graduated every year, the School has approximately 5,500 enrolled in correspondence courses at any one time. Those interested in enrolling in correspondence courses are encouraged to write to the Commandant, Finance School; Attention: Director of Non-Resident Training, Fort Benjamin Harrison, Indiana.



On visit to manufacturing plant, author gets briefing on advanced type of business machine that may be used to increase efficiency of Finance Corps operations.

Training for officers and enlisted personnel and certain civilians is provided at the Finance School, located at Fort Benjamin Harrison, Indiana.

One major significant step toward modernization was the adoption on 1 January 1959 of the Military Pay Voucher System. This provides a complete detailed statement of the soldier's account and expenditure data in the several categories for budget administration. It simplifies small unit operations and insures greater accuracy. The pay voucher received by each soldier contains a full explanation of all deductions.

Currently, tests are being made of electro-mechanical and electronic equipment which may be utilized in the future to facilitate still further the accurate and timely payment of troops, allowances and allotments. Accounting reports also are expected to be expedited.

First of these tests is use of an electrical accounting machine (EAM) punch card system to maintain the soldier's pay account at station level. Soldiers will immediately be able to take note of the system changes, because their pay statements will take on a new appearance.

Still another test involves use of an automatic typewriter controlled by a

punched paper tape input to prepare Military Pay Vouchers. This system would produce substantially the same end-results as the punch card equipment. However, it might prove more suitable for smaller installations where the punch card system is not used.

A third major test involves the Mobile Digital Computer (MOBIDIC), an electronic system designed for use with a field army. Application of such instruments or other business type computers may entail input and output of data by transceivers, storage of individual pay accounts on plastic tape, computations of earnings and net pay at electronic speeds in the memory portion of the system, and preparation of pay vouchers on tabulating equipment.

All this means that speeds could be attained greatly exceeding present production rates. Further, a computer system could produce tapes or punch cards containing selected data for budget, accounting or other management needs.

Adoption of any of these methods now under test will mean more efficient methods of handling pay. Such modernization and mechanization could open the way to integrated data processing in a single continuous chain from point of origin to top echelon.

Thus data could be recorded at unit or station level and transmitted in immediately usable form to higher commands, to the Finance Center or to an intermediate accounting office.

IN THESE days when news sources are constantly chronicling new advances in television, in atomic devices, in miracle drugs, in speedier travel, we in the Finance Corps are determined to keep abreast of the times by keeping pace with these changes as they affect our operations. Continuous testing and adoption of new concepts in financial management practices, per-

sonnel management, supply and finance operations with tactical units will be pursued.

The basic requirements of paying military personnel and providing for the financial needs of their families have not changed since 1775—but the system and methods through which payment is accomplished has changed and will continue to change. Commanders now and in the future will insist that their personnel be paid correctly and on time. The Finance Corps is determined to anticipate the Army's challenging requirements for finance services in the Space Age.



**"Home
of the
Army
Dollar"**

A MODEL of modern business management is the Army Finance Center at Fort Benjamin Harrison, Indiana—next to the Pentagon the largest Defense building in existence. With an area of 1,596,000 square feet and employing a work force of 3,800, this modern giant is the center of all finance operations of the U. S. Army. The Center—

- Maintains the record of pay of every soldier and officer in the U. S. Army.
- Issues more than 750,000 checks each month covering allotments, retired pay, transportation and other expenditures. (There are more than 1,400,000 allotments currently in force.)
- Maintains records of deposits for nearly 200,000 soldiers all over the world, paying 4 percent simple interest.
- Makes withholding and Social Security tax payments to the U. S. Internal Revenue Service based on deductions from soldiers' pay.
- Pays all transportation costs of the Army and Air Force.
- Settles an average of 15,000 claims per month.
- Develops statistical data used in preparing and justifying military pay and allowance budget estimates.
- Conducts post-audit of military pay accounts for the entire Army.

The Center contains 397 electric accounting machines and 12 automatic data processing machines (ADPS). A new, higher capacity system is to be introduced in 1961 using the latest and most modern electronic computing equipment.

***In a survey of soldier food preferences,
military menu planners discover that
food dollars go further when***

Taste, too, Is a Factor



David R. Peryam

IN MESS HALLS and serving lines from Forts Bragg and Benning to Forts Greely and Shafter, the soldier carrying tray or messkit has an influential vote—and veto power—which receives serious consideration by food technologists on the Army-Air Force Menu Planning Board.

The Board compiles that all-important document—the Master Menu—which serves as the basic plan for feeding at all Army and Air Force installations. The Master Menu is published

DAVID R. PERYAM is Chief, Food Acceptance Branch, Quartermaster Food and Container Institute for the Armed Forces, Quartermaster Research and Engineering Command, Chicago, Illinois.

monthly, six months in advance, listing carefully planned menus for the three meals for each day of the month. This guide is closely adhered to, except where local conditions make certain foods non-available or difficult to obtain.

Now, in a survey of some 30,000 enlisted men over the United States, the food preferences of individual servicemen have been thoroughly canvassed and compiled in a 160-page report, so that today's menu may reflect their preferences at chow time.

Since feeding the United States Armed Forces involves the largest institutional feeding program in the Nation, the food selection problems of

military menu planners are of greater magnitude and significance than those of other institutional groups. A small error in selection can make a noticeable dent in the tax dollar. To illustrate, consider the black olive. If half a million soldiers can't stand the sight of black olives—there goes a mountain of olives into the garbage pail.

Military menu planners have to keep many things in mind in selecting foods for dining rooms and field kitchens around the world. Nutritional values, food costs, the seasonal availability of supplies and optimum serving portions are all important, but above all they must consider the food preferences of men of military age. Their expert knowledge of these key aspects of food selection benefits the health and morale of our military forces, prevents waste, and helps the food economy of the Nation through utilization of seasonal surpluses.

To provide adequate, attractive, economic meals for millions of active men would appear at first sight to be easy. But what if, after you have laid out a carefully planned, nutritionally balanced, calorically adequate, eco-

nomical meal, the soldier doesn't like it? Obviously, a meal partially consumed is not a balanced meal—nor an economical meal.

Menu planners have long needed a reliable, convenient index of what foods soldiers, sailors, marines, and airmen like and dislike. This need has recently been met. Now available to the Armed Forces is a table listing the degree of preference of men in the U. S. Armed Forces for each of some 400 foods served in military installations in the United States. This table and a thorough-going explanation of the survey procedures and statistical analyses used in producing it are contained in a document entitled *Food Preferences of Men in the U. S. Armed Forces*, published in 1960 by the Army Quartermaster Corps. This modest brochure has already attracted wide attention, both inside and outside the Army.

How It Was Done

AS a first step in this highly important survey, questionnaires were used to find out (1) how much each man liked or disliked each food and (2)

It isn't enough to know what soldiers prefer to eat—the food must be properly prepared, too, as these Boston area reservists learn at a Cooks and Bakers School.





Food preferences were learned from a survey of some 30,000 enlisted men who filled in detailed questionnaire.

what his background was. With regard to background, the information sought of a servicemen included the region of the United States where he grew up; whether he was brought up in a city, town, or on a farm; length of time in the service; age; and education.

The surveys, by the way, were conducted in Army installations of varying strengths. Among the installations surveyed were Forts Monmouth, Devens, Houston, Bliss, Belvoir, Knox, Benning, Sill and Carson. Thousands of men, a cross-section of the Nation, responded and cast their votes.

Rating of foods was based on a nine-point scale in which "like extremely" equals 9 and so on down to "dislike extremely" which equals 1. A rating of 8 or above indicates an extremely high preference for a food; a rating of 5 or below, very low preference. A rating of 5 indicates that the servicemen can take it or leave it—and probably half or more of them will leave it.

In considering specific ratings, it must be kept in mind that each rating represents a composite "vote" on the merits of a food. Thus, even with the very high rating for grilled steak, 8.31, it is evident that not every serviceman likes grilled steak "extremely." But without question most do, and on the principle of the greatest good for the greatest number, the composite vote of men in the U. S. Army clearly indicates that the menu planner can't go wrong in putting grilled steak into the menu now and then.

THE lines along which effective menus can be developed are not, however, restricted to the few high rating dishes. Thus, although lamb patties rate only 5.55, or "like slightly," this only means that lamb patties should not appear too frequently on the menu. And when they do, it is indicated that they should be supported, if possible, with foods of higher preference ratings. In other words, the rat-

ings offer the menu planner a measuring device on probable consumption.

Taste Trends

THERE were many surprising upsets when the serviceman was given a chance to "vote" on his foods. Baked beans (6.17), popularly assumed to be a favorite among starch-type foods, actually fell below spaghetti with meat sauce (7.30), baked macaroni and cheese (6.65), and french fried potatoes (8.17).

During the last 20 years salads have increased in popularity among civilians, if one can judge by their increased use and diversity in restaurants and other non-military feeding establishments. Salads are rated relatively low, however, by the serviceman. They hover around 5, "neither

like nor dislike." Chilled asparagus salad with French dressing (4.44) is definitely "disliked" in contrast with cabbage slaw (6.26) which is "liked slightly" to "moderately." Neither of these salads, apparently, would be civilly treated if, inadvertently, they were served repeatedly. Some salads, apparently, are for the rabbits.

It appears that a meal composed of baked fish (4.58), asparagus with hollandaise sauce (4.20), rhubarb (5.30), and iced coffee (4.15) would be widely "disliked"—and by some, no doubt, violently. On the other hand, a meal that would go over with a bang would be one composed of fried chicken (8.24), hot biscuits (8.33), strawberry short cake (8.32), and fresh milk (8.60). And a pineapple, apricot, and banana salad

It's pretty obvious that meal of grilled steak, corn, french-fries, pineapple, apricot and banana salad, hot rolls, strawberry shortcake, milk is well liked.



FOODS BEST LIKED AND LEAST LIKED BY ARMY MEN

<i>Best liked</i>		<i>Least liked</i>	
<i>Food</i>	<i>Rating</i>	<i>Food</i>	<i>Rating</i>
Fresh milk	8.6	Broccoli	4.56
Hot rolls	8.4	Baked hubbard squash	4.52
Hot biscuits	8.33	Fried parsnips	4.47
Strawberry short-cake	8.32	Creamed asparagus	4.47
Grilled steak	8.31	Chilled asparagus salad with French dressing	4.44
Ice cream	8.26	Cabbage baked with cheese	4.3
Ice cream sundae	8.24	Asparagus with hollandaise sauce	4.20
Fried chicken	8.24	Iced coffee	4.15
French fried potatoes	8.17	Cauliflower with cheese sauce	4.09
Roast turkey	8.13	Candied parsnips	4.06

(7.42) could be slipped into this last-mentioned meal without noticeable down-grading of its total rating.

Further study of the rating of total meals and the influence of meal patterns on acceptance remains to be done; then even more definitive conclusions can be drawn. Follow-up studies show that ratings do foretell consumption, and it seems quite possible to increase acceptability of a low-rated food by properly combining it with others of higher preference.

Future Use

ALTHOUGH the original purpose of the surveys was to provide guidance in mess-hall or A-ration feeding programs, from a military point of view the most important application may be in guiding the development of dehydrated or irradiated foods for use in operational feeding. The development of new, radically different rations for new modes of combat is a primary food research and engineering activity of the Army Quartermaster Corps. Since these new foods must meet severe restrictions as to weight and

volume, a burden has been placed on the food scientists and technologists in their attempt to attain a level of acceptance that will assure consumption, and thereby proper nutrition.

In past eras, the Army has only had opinion or scattered experience to guide food selection for the Army mess. Now the facts are in. Some of these facts may have been surmised; but many come as quite a surprise.

Besides proving the obvious—that the young soldier prefers strawberry shortcake to cabbage or broccoli—the survey codifies for the first time his specific preferences on all food items normally included in military menus and establishes reliable acceptability ratings on each.

This knowledge of what the soldier will eat, how much and how often, in what form and combination has important repercussions in the field of food procurement, where even a minimal error can be costly. Take the case of the black olives (4.69), for instance. If the Army serves one black olive too many per man, it can be an 870,000-olive goof.

NEWS

of professional interest

M60 and M14 in Production

Production has begun of the Army's new lightweight machine gun, the M-60, while delivery of the new M14 rifle has been speeded up with recent opening of a new production line at Winchester-Western Division of Olin Mathieson Chemical Corporation, New Haven, Connecticut.

First of the M-60's came off the production line at Saco-Lowell Shops, Saco, Maine, which has the production contracts for 14,890 of the new weapons. The M-60, firing the 7.62 NATO bullet, will replace the air-cooled M-1919A4 and M-1919A6 and the water-cooled .30 caliber Browning machine gun.

The M14 will replace the Garand M1, the M2 carbine, Browning Automatic Rifle and the M3 submachine gun. The new production line at Winchester-Western will turn out half of the 70,000 authorized for the current fiscal year while the remainder will be made at the Army Ordnance Armory, Springfield, Massachusetts. All together the Army has ordered 269,100 M14 rifles.

Night Landing Test

Latest infrared night-viewing equipment items were put to test in a night supply operation exercise over the beaches of the Virginia Capes by some 600 troops of the U.S. Army Transportation Training Command. Supplies, vehicles, materials-handling equipment and troops were carried ashore at Fort Story in a variety of landing craft, helicopters and amphibians, including some still in the development stages. Infrared lights and signaling devices were used to guide the craft ashore and to illuminate landing and unloading areas. After securing the beach, the troops staged a demonstration of securing and operating an air strip in darkness.

The night operations were preceded by day-time demonstrations of commercial and Army-developed equipment utilized in logistical over-the-shore operations, and also demonstrations of helicopters. Infrared devices used in the exercise were developed by the Engineer Research and Development Laboratory, Fort Belvoir, Virginia.

Atomic Power in Arctic

Electricity for power, lighting and heating now is being supplied to the Army's undersnow installation at Camp Century, Greenland, by a portable nuclear power plant. Camp Century, now housing 105 civilian scientists and military personnel, was designed by the Army Corps of Engineers to cope with the unusual problems of constructing camps and bases in polar regions. Thirty prefabricated buildings, all located in undersnow trenches, serve as housing, laboratories and other facilities. All are being supplied with electricity by the 2,000 kilowatt, semi-portable, pre-packaged nuclear power plant which was manufactured by ALCO Products, Inc., Schenectady, New York. Part of the plant was flown into Greenland, while part was shipped in through Military Sea Transport Service and hauled to Camp Century by tractor-drawn sled trains.

Fritzche Army Airfield

A new air facility now under construction at Fort Ord, California, will be named Fritzche Army Airfield, honoring the late Major General Carl F. Fritzche, Commanding General at Fort Ord who lost his life last September in an aircraft accident. The facility, first and largest Army airfield west of the Mississippi to be designed specifically for Army operations, will be an all-weather, 24-hour-a-day installation.

Radiation-Resistant Cell

A solar cell that is resistant to damage by high energy radiation in space has been developed by the Army Signal Corps. Such cells are useful as the principal source of power for electronic equipment in satellites and space probes. The new cells are made by diffusing phosphorus into the surface of a "p-type" silicon crystal, whereas present cells are made by diffusing boron into an "n-type" crystal. The process for making the cells was developed by U.S. Army Signal Corps scientists at Fort Monmouth, New Jersey. Details concerning the manufacturing process will be made available to the American electronics industry by the U.S. Army Signal Research and Development Laboratory.

Nike-Zeus Progress

A supplemental contract for \$199,125,000 for development of the Nike-Zeus system has been awarded by the New York Ordnance District to the Western Electric Company, permitting continuance of the Nike-Zeus research and development program for another year. The system now is in the advanced development stage, with tests being made at White Sands Missile Range, New Mexico, and Whippany, New Jersey. Additional future tests are planned at Pt. Mugu, California, Ascension Island in the Atlantic, and Kwajalein Island in the Pacific. The Army Rocket and Guided Missile Agency is supervising development of the system by an Army-industry team.

At White Sands, the first prototype model of a target intercept computer for guidance of the Nike-Zeus anti-missile missile has been installed. It will receive position, speed and direction of incoming missiles and use this intelligence to dictate precise launching time and steering orders to the Nike-Zeus to intercept and destroy enemy ICBMs.

VTOL Ejection Seat

A rocket-propelled seat equipped with an automatic quick-opening parachute is being tested for emergency use in Army vertical-take-off-and-landing research aircraft. Weighing 68 pounds, it is about half the weight of units now in use, and is being developed by the Columbus, Ohio, Division of North American Aviation, Inc.

Anti-Malaria Tablet

Developed under Army research contract, a new anti-malaria pill will be tested by U.S. troops in Korea. The tablet which combines two drugs used separately in the past for malaria prevention—chloroquine and primaquine—resulted from Army-supported studies conducted by Dr. Alf S. Alving of the University of Chicago, under contract with the Army Medical Research and Development Command. The new pill is considered an improvement over earlier methods because it is easy to administer. In the past chloroquine has been administered to suppress malaria symptoms, and primaquine on leaving the malarial area to kill parasites which otherwise often dwell for years in the liver and other tissues to cause later relapses.

Seismic Detection

Detection and identification of earthquakes and underground explosions will be carried out at the new seismic research station recently completed at Fort Sill, Oklahoma. The station, known as Wichita Mountains Seismological Observatory, is part of the U.S. seismic study program known as Project Vela-Uniform. The program is under the overall direction of the Department of Defense Advanced Research Projects Agency.

The new station will use equipment identical to that recommended by the Geneva Conference of Experts who met at Geneva, Switzerland, in 1958 to "study the possibility of detecting violation of a possible agreement in the suspension of nuclear tests."

R&D Problems Guide

With each of the Army's seven Technical Services publishing a volume, the "U.S. Army Research and Development Problems Guide" has been prepared, listing problems in science and technology with which the Army's Research and Development program is concerned. Distribution of Volumes I through VII is made by the appropriate Technical Service. Several of these are classified and may be obtained only by those with proper interest. Volume VIII, entitled *Supporting Research*, contains a compilation of basic and applied research problems taken from the other seven volumes, plus 56 new problems. It is prepared for distribution.

bution to educational and other non-profit research institutions and may be obtained from Army Research Office, Office Chief of Research and Development, Department of the Army, Washington 25, D.C.

Nuclear Training for Reservists

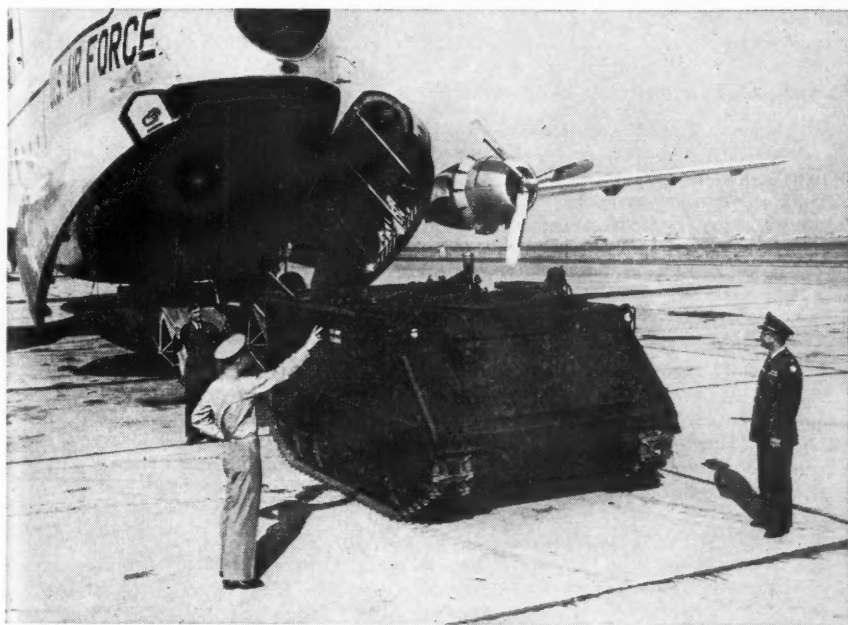
Officers and enlisted men of the reserve components are being trained in the most modern weapons of war including nuclear items, according to a recent announcement by Secretary of the Army Wilber M. Brucker on the anniversary of the launching of the One Army concept. Extensive training in nuclear weapons and delivery systems is being given to selected Reserve and National Guard officers at the Command and General Staff College and six branch schools. Training also is being given selected reserve component units in the Honest John, with atomic capability, and other modern weapons.

Best Mess Award

Stressing the importance of good meals as a morale factor, the Department of the Army Best Mess Award program has been instituted, sponsored by the Executive Stewards and Caterers Associations, Inc., a nonprofit fraternal and educational organization including leaders in the field of food preparation. The program will be administered by the Quartermaster General.

Initial competition will be held at lowest practical levels, then at each command level until finalists have been nominated. All Active Army TOE and TD troop messes in operation on 1 September 1960 are eligible to compete. Trophies will be presented to winners in various categories at the annual convention of the sponsoring Association scheduled for 12 August in Detroit, Michigan. Details are contained in DA Circular 30-1.

Amphibious, Air-mobile, Aluminum M113



DELIVERIES are scheduled to start early this year on the U. S. Army's aluminum personnel carrier M-113 which is capable of amphibious as well as air-drop operations. Light in weight, the new vehicle has superior cross country mobility and is adaptable to other multiple functions. Food Machinery and Chemical Corporation, San Jose, California, holds the manufacturing contract.

Stepped Up Radar Power

A new microwave tube which will boost output power of military radars 5,000 times for more precise tracking at longer ranges than previously possible has been developed by Sperry Gyroscope Company. The multimegawatt amplifier uses short wave length—half as long as in earlier super-power tracking systems—to provide sharper beams for pinpointing small missiles. The mid-section of the tube uses a 100-ampere electron beam to generate 3,000,000 watts of radar power which can "see" missiles at longer ranges.

Construction Supply Agency

Location of the new Military Construction Supply Agency will be at Columbus, Ohio, it has been announced by Secretary of the Army Wilber M. Brucker, who has been designated as the Single Manager for Military Construction. The new agency will be headed by an Executive Director under jurisdiction of the Army Chief of Engineers. The staff of the new agency will include officers of all the services and civilian employees experienced in military supply management.

Supply Activities

Adjustments in supply activities within the Army are expected to result from designation of the Secretary of the Army as Single Manager for Military General Supplies, which resulted in establishment

of the Military General Supply Agency at Richmond, Virginia. This agency will provide all the military services with general supply items such as handtools, house-keeping supplies and special field equipment. It is anticipated that implementation of the assignment will result in reorganization of missions and functions of some Army supply installations, including adjustments in personnel strength. An increased workload by the Quartermaster Corps is foreseen as part of the assignment which is another step in the unification of supply by the Department of Defense.

Marianas History

Fiftieth volume in the series "United States Army in World War II," and ninth in the subseries "War in the Pacific" has been published as *Campaign in the Marianas* by the Office of the Chief of Military History. Dr. Philip A. Crowl, now with the Department of State, is the author. The volume is obtainable for \$6.50 from the Superintendent of Documents, Government Printing Office, Washington 25, D. C.

High Efficiency Zeus Elements

If the ordinary home television set were fully transistorized with elements of the same type as the millions in use in the entire Nike-Zeus system there would be a set failure only once in about 75 years, according to estimates at the Army Ordnance Guided Missile School.

Determining Distance and Position

DESIGNED to provide rapid, accurate means of measuring distances and establishing positions, an electronic survey system is being evaluated at the U. S. Army Engineer Research and Development Laboratories, Fort Belvoir, Virginia. Called Lorac, it can be used to measure inter-island and other geodetic ties where line-of-sight conditions do not exist, and for establishing positions of boats, aircraft and land vehicles. The system uses a continuous-wave unmodulated radio transmission, sent out from each end of the line to be measured. It can measure distances of up to 100 miles over mountains and 200 miles over ocean areas.

UNMAPPED areas—arctic, desert or jungle—may now be traversed with greater accuracy as a result of a new land navigation system developed by the U. S. Army Engineer Research and Development Laboratories, Fort Belvoir, Virginia, and the Chicago Division of American Bosch Arma Corporation.

The newly developed land navigation system consists of four lightweight units—a gyrocompass, an analog computer, a distance data transmitter, and power supply—that provide constant heading and position information. Service testing of the new land navigational aid is expected to be completed shortly.

ARMY INFORMATION DIGEST

INDEX TO VOLUME 15

JANUARY-DECEMBER 1960

THIS INDEX is divided into two parts; an alphabetical title and subject list, and an author list. Page numbers are indicated by Arabic numerals immediately following the month of issue. Roman numerals denote unnumbered cover pages; II, inside front cover; III, inside back cover; and IV, back cover.

TITLE AND SUBJECT INDEX

A

Advanced Research Projects Agency, (ARPA) Jan. 60
 Aerial Mobility, Feb. 60; May 32
Aggressor Adapts to the Atomic Age, Col. Rollins S. Emmerich, Feb 34
 Aid to Chile, Aug 62
Air Car Under Test, Jul 65
 Air Cavalry, Apr 20
 Air Defense:
 Mauler system, Jul 62; Oct 17
 Role, Feb 10
 School, Jun 62
 Airborne:
 Crane, Feb 62
 Frogmen, Sep 57
 Radar system, Aug 31
 Surveillance, Dec 63
 Training, Sep 6
 Aircraft maintenance hangar, Dec 63
 Airlift requirements, Oct 32
 Airstrip building, Feb 47
 All-Army Photography Contest, Oct 63
 American:
 Ordnance Association, Feb 53
 Red Cross, Mar 7
Archive of Courage, Capt. Henry J. Kelty, USA-Ret., Dec 18
 Arctic:
 Cold Regions Research & Engineering Laboratory, Mar 62
 Combat boot, Aug 63
 Distance-measuring device, Aug 20
 Signal Corps expeditions, Jul 36
 Undersnow experiments, Aug 16
 Arlington Cemetery, Dec 62
 Armed Forces Enlisted Personnel Benefit Association, Sep 62
 Armor:
 Desert training, Sep 33
 Leadership fund, Oct 61
 M60 tank, Sep 39
 Army:
 Air Defense role, Feb 10
 Air Force Exchange Service, Mar 64
 Air Force Postal Service, Jul 56
 Armor and Desert Training Center, Sep 33

Aviation, Sep 60
 Aviation Association of America, Nov 28
 Ballistic Missile Agency, Feb 61
 Budget, Feb 32; Apr 16, 24
 Command and General Staff College, Nov 54
 Civilian Schools Program, Sep 61
 Combat Surveillance, Mar 53
 Educational levels, Apr 62
 Enlisted College Training Program, May 61
 Exhibit Unit, May II
 Fellowships, Aug 28
 Flag, Jul 48
 Future needs, Jun 22
 Hawaii, Jul 2, 14
 Help to school children, Mar 2
 Home Town News Center, Oct 56
 Industry team, Project MAN, Aug 15
 Infantry Museum, Jan III
 Information Officer program, Jan 29
 Information School, Sep 42
 Language School, Apr 56
 MAAGs & Missions, Feb 7, Nov 32
 Manpower, Feb 22
 Marksmen at Camp Perry, Nov 21
 Map Service, Mar 45; Oct 8
 Mobility in, Apr 32
 Modernity, May 2
 National Guard, Jan 8, 61; Mar 10
 National Security role, Apr 2
 Nurse Corps history, Oct 63
 Officers education, Aug 24
 Ordnance & Guided Missile Command, Dec 4
 Outlook for 1961, Apr 16
 Polls, Jun 38
 Posters, Apr 64; May 64; Jun 64; Aug 64
 Reports, Jun 43
 Research and Study Fellowship Program, Aug 28
 Research Office reports, Sep 62
 Reserve duty, Jan 18
 Reserve history, Jan 21

Army—continued

Rocket and Guided Missile Agency,
Dec 4
Reserve Signal Training, Jan 61
Reserve Unit Award, Aug 62
Role in Free World, May 23
Safety Program, Dec 12
Single Manager, automotive sup-
plies, Aug 62
Technical Services roles, May 27
Transportation Materiel Command,
Jun 17
War College, Jan 54
Weapons, Aug 6
Army Airlift Requirements, Gen.
Lyman L. Lemnitzer Oct 32
Army Aviators Set Records, Nov 28
Army Budget, FY 1960, Feb 32
Army Chiefs and Executives, Feb 30
Army Marksmen Gain Top Honors,
Nov 21
Army National Guard Today, Maj.
Gen. Donald W. McGowan, Mar
10
Army Petroleum Logistics, Col. Paul
B. Tonks, Dec 46
Army Plans and Programs, Gen.
Lyman L. Lemnitzer, Apr 16
Army Role in the Olympics, M/Sgt
Robert L. Groover, Jun 24
Army Shows Them, The, Lt. Col.
Mary C. Fullbright, Mar 28
Army Takes A Poll, The, Lt. Col.
Kenneth S. Hitch, Jun 38
*Army's Contributions to the National
Commitment*, Gen. George H.
Decker, Feb 2
Army's Top-Level College, The, Maj.
Gen. William P. Ennis, Jr., Jan 54
Artillery:
Hamilton's Battery, Jul 50
Weapons at Project MAN, Aug 10
Assignment, Officers, Nov 12
Association of the United States
Army, Aug 61; Nov 22
Atomic:
Demolition munitions, Aug 62
Power, portable, Aug 18
Automatic Data Processing in Lo-
gistics, Jun 20
B
Ballistic Missile:
Construction Office, Oct 62
Tracking, Feb 62
Banner of Proud Heritage, Jul 48
Battery D, Jul 50
Battles Without Bloodshed, Lt. Gen.
Gordon B. Rogers, Dec 32
Better Highways and National De-
fense, Col. Albert A. Wilson,
Jan 50
Big Red One, The, Maj. Gen. T. W.
Parker, Nov 44
Brainpower and Manpower, Col.
Jackson E. Shirley, Aug 24

Brucker, The Hon. Wilber M., Feb II;
Mar II; Apr II, 6; May II; Jun
II; Jul II; Aug II, 6; 44; Sep II,
27; Dec II

C

Camp:
Century, Aug 17
Kilmer, Jul 25
Perry matches, Nov 21
Can You Fill This Chair? Maj. Gen.
William W. Quinn, Jan 29
Canopy Release, Sep 58
Cantigny War Memorial Museum,
Dec 18
Career development program, Nov 12
Chemical Corps:
Breathing Apparatus, Jan 40
Chemical, Biological Warfare, Jan
32
Heat-cold tests, Sep 61
Industrial Liaison Office, Apr 50
Multiple resuscitator, Jan 35
Preventing toxic injury, Jun 63
Radiological test area, Jul 63
Research, Apr 50; Sep 60
Rocket firing device, Nov 62
Tear gas, Aug 63
Chief of Staff Personnel Changes, Nov
30
China-Burma-India Theater history,
May 63
City Under the Snow, Brig. Gen. S.
R. Hanmer, Aug 16
Civil War Unknowns, Nov 64
Civilian:
Awards, Jun 63
Career Program, Jan 63
Schools program, Sep 61
Clarke, Gen. Bruce C., Mar 14; Nov
62
Claymore, Capt. George L. Robson,
Jr., Aug 46
Cold Regions Research and Engineer-
ing Laboratory Mar 62
Combat:
Boot, Aug 63
Leadership Trust Fund, Draper
Trophy, Oct 61
Support, May 26
*Combat Surveillance Looks to the Fu-
ture*, Brig. Gen. William M.
Thames, Mar 52
Communications:
Combat support, May 33
Signal Corps history, Jul 32
Communism, threat of, Jan 2
Community Relations:
Army Language School Chorus,
Apr 56
France, Aug 42
Germany, Aug 33; Dec 52; Oct 64;
Hawaii, Jul 13
Italy, Aug 38
II U. S. Army Corps, Jul 30

Community Relations Is Everybody's Business, Col. Morton P. Brooks, Aug 33

Consider the Odds, Maj. Casper Berger & Prof. James J. Chastain, Oct 26

Corps of Engineers:

Airborne crane, Feb 62

Airstrip construction, Feb 47

Ballistic Missile Construction Office, Oct 62

Camp Century, Aug 17

Distillation unit, May 63

Glacier drinking water, Aug 22

Greenland undersnow experiments, Aug 16

Infrared gunsight, Dec 65

Missile service tower, Apr 63

Nike construction on Taiwan, Apr 44

Prefabricated buildings, Apr 62

Thermograph T-2 (Infrared device) Aug 53

Variable height pier, Feb 63

Water resources, Dec 55

Yukon River power sites, Jan 63

Cossacks in Khaki, M/Sgt Allis F. Hussy, Apr 56

Courier Communications Satellite, Dec 17

Crane helicopter, Mar 63

D

Data Processing, Jun 17; Jul 63

Decker, Gen. George H., Jul II; Oct II; Nov 30

Defense Advisory Committee on Women in the Services, (DACOWITS), Feb 64

Desert Training Center, Brig. Gen. John Barclay Sullivan, Sep 32

Developing Our Water Resources, Alfred Rosenthal, Dec 55

Diamond Ordnance Fuze Laboratories, Oct 31

Directorate, Officers Assignment, Sep 60, Nov 12

Disaster planning, Jan 10

Disposable tents, Jan 62

Distillation Unit, May 63

Documents of Decision, Col. Frederick O. Diercks, Oct 8

Dog training, Feb 29

Draper Combat Leadership Trust Fund, Oct 61

E

Earth Satellite Program, Mar 35

Eddleman, Gen. Clyde D., Aug 35; Nov 31

Education:

Army Enlisted College Training Program, May 61

Army Fellowships, Aug 28

Army War College, Jan 54

Civilian level RA officers, Nov 19

Civilian Schools Program, Sep 61

Officers at civilian colleges, Aug 24

Reserve school enrollment, Apr 63

West Point Preparatory School, Apr 60

Women's Army Corps programs, Mar 28

Eisenhower, President Dwight D., Aug 5; Sep IV

Electronic Eyes and Ears, Aug 52

Electronics:

Combat surveillance systems, Mar 57

Miniaturization program, Sep 46

Testing facilities, Aug 61

Ruby Maser, Aug 52

Thermograph T-2, Aug 53

Trouble-shooting equipment, Jan 61

Emergency Medical Care Program, Jan 15

Equipment maintenance, Jan 50

Exercises:

Big Slam/Puerto Pine, Jun 62; Oct 39

Bright Star/Pine Cone III, Aug 61 1960-61, Nov 63

Little Bear, Apr 62

Explorer satellites, Feb 63; Apr 63

F

Fairchild:

Dr. Byron, Sep 62

Target Map Coordinate Locator, Apr 63

Far East Trip Report, Brucker, Sec/Army, Wilber M., Apr 6

Firepower, May 30

1st Infantry Division:

History, Nov 44

Museum, Dec 18

First Twenty Years, The, Maj. Willis D. Lawrence, USAF, Jul 56

Flight navigation system, Feb 63

Fluid Amplifier, Oct 31

Flying Bulldozer, The, Lt. Col. David L. Gundling, Feb 46

Flying Crane, Mar 63

Flying Telegraph, Jul 34

Food study, Jul 64

Forward Strategy, Feb 4

4th Infantry Division, Oct 44

Freeman, Maj. Gen. Paul L., Feb IV

From Flying Torch to Talking Satellite, Jul 32

From Muzzle Loaders to Missiles, Jul 32

Future Army Needs, Jun 23

G

Glacial water supply, Aug 22

Glaciology, Mar 40

Goodwill Gets Results, Aug 42

Greenland:

Greely expedition, Jul 36

Nuclear reactor, Aug 18

Undersnow experiments, Aug 16

Guardian of the Pacific, Dr. Stetson
Conn, Jul 14

Guerrillas, June 2

H

Hamilton's Battery, Jul 50

Hawaii, U. S. Army in, Jul 2, 14

Hawk missile, Apr 55; Nov 62

Helicopter:

Crane, Mar 63

Light observation, Sep 60

Mobility role, Apr 35

High-altitude test chamber, Mar 63

History:

The Army and Industrial Man-
power, Sep 62

Chronology: 1941-1945, Aug 63

Publications, Feb 62; Mar 63

Hodge, Duncan, Feb 61

I

Iceland, Battalion Combat Team,
Mar 62

If Disaster Comes, Lt. Gen. Leonard
D. Heaton, Jan 10

Improved Aerial Mobility, Feb 60

Industrial Liaison Office (Chemical
Corps), Apr 50

*Industrial Partnership in Chemical
Research*, Capt. William Nelson,
Apr 50

Infantry:

History, Nov 2

Refresher course, Mar 62

Training, Sep 6

Infantryman, The, Gen. Bruce C.
Clarke, Nov 2

Information Officer Program, Jan 29

Infrared devices, Aug 53; Dec 63

International Day, Oct 64

International Geophysical Year, Mar
32

*Invisible Weapons for the CBW Arse-
nal*, Maj. Gen. Marshall Stubbs,
Jan 32

IROAN, (Inspect & Repair Only As
Necessary), Jun 50

Irradiated foods, Jul 64

It's Always Tomorrow, Col. Walter M.
D. Tisdale, Dec 28

J

Jet assist research, Jan 62

Joint Chiefs of Staff, Nov 30

John J. Pershing—the Human Side,
A. A. Hoehling, Oct 2

Judge Advocate General, Jun 57

K

Key to National Security, Lt. Gen.
Arthur G. Trudeau, May 38

L

Lacrosse units, Feb 61; Jun 62

Larc Crosses Lake, Dec 59

Leader's Reaction Course, Aug 50

Leadership:

Morale, Sec Brucker on, Mar 3

NCO, Jan 42; Mar 22; Sep 25

Officer, Sep 16

Ranger, Sep 6

Lebanon history, Feb 63

Lemnitzer, Gen. Lyman L., Jan 4, IV;

Apr 16; May II; Jun II; Jul II;

Aug II, 8, 40; Sep II, 9, 21; Oct

32; Nov 30

Light, Compact, Reliable, Brig. Gen.

J. C. Monahan, Sep 46

Logistics:

Combat, May 27

Hawaii, Jul 9

History, Feb 62

Logistics for the Future, Brig. Gen.

Howard K. Eggleston, Jr., Jun 12

Longhorn Ordnance Works, Jan 60

M

M-14 rifle, May 61

M60 on the Way, Sep 38

McRae, Dr. James W., Jan 61

MAAG Vietnam, Nov 32

MAAGs & Missions, Feb 7; Nov 32

Making a Will, Capt. Clifford M.
Roth, Jun 57

MAN—the Essential Ingredient, Lt.

Col. John E. Lance, May 4

Maneuvers (See Exercises)

Banyan Tree II, May 61

Big Slam/Puerto Pine, May 61

Manhattan Project, May 2

Manpower, Feb 22

Map making, Oct 8

Marksmanship:

Camp Perry matches, Nov 21

Missile, Oct 18

Marshall, Gen. George C., Feb 62;
Sep 2

Awards, Sep 5

Space Flight Center, Jun 62

Memorial Dinner, Sep 61

Marshall, Brig. Gen. S. L. A., Aug II

Mauler Concept, Oct 17

Medical Corps, disaster planning, Jan
10

Medical Department History, Aug 64

Medium Assault Weapon, Jan 41

Meet Mauler, Oct 17

Men and Missions—the Army's Tasks.

Lt. Gen. John C. Oakes, May 14

Mershon Memorial Award, Nov 26

Meteorology, Mar 38; Oct 40

Micromodules, Sep 46

Midwest Relay Station, May 62
 Military Assistance:
 Advisory Groups, Feb 8; Nov 32
 Program, Feb 8; Jul 8; Sep 62
 Military Police Corps Museum, May 63
Military Reading List Revised, Oct 54
 Miniaturization, Sep 46
Missile Fumes Safeguard, Jan 40
Missile vs Missile, Apr 55; Sep 64
 Missile-borne TV camera, Jun 63
 Missile Master sites, May 63
 Missile Monitor, Jul 63
 Missiles:

 Hawk Firing, Apr 55; Nov 62
 Lacrosse battalions, Feb 61; Jun 62
 Longhorn Ordnance Works, Jan 60
 Mauler system, Jul 62
 Men and, Oct 18
 NATO Nike firings, Jul 62
 Nike firing records, Apr 62; Jul 62
 Nike site construction, Apr 40, 44
 Nike-Hercules, Jan 62; Sep 64; Oct 61; Nov 62; Dec 62, III
 Nike-Zeus, Mar 51; Aug III; Nov 62; Dec 2
 Pershing test, May 61; Jun 62; Jul 62; Sep 60; Oct 61
 Project MAN displays, Aug 10
 Redstone firing, May 64
 Saturn, May 62, Aug 30
 Sergeant system, Jan 62
 Service tower, Apr 63
 Strongarm, Feb 63
 Signal Corps support, Jul 42
 Training in, Mar 22; Oct 18

Mobility:

 Aerial, Feb 60; May 32
 Future Planning, Apr 32; Jun 12
 Logistical concepts, Jun 12
 Project MAN displays, Aug 7
Mobility Now, Brig. Gen. Clifton F. von Kann, Apr 32
Modern Army Needs MAN, Hugh M. Milton II, May 2
 Moore, Lt. Gen. James E., Feb 61
 Mutual defense treaties, Feb 2
Multiple Resuscitator, Jan 36
 Mullaly, Charles F., May 62
Musical Ambassadors in Army Green, Sp4 Philip J. Webster, Dec 52
 Myer, Maj. Albert, Jul 32

N

NCO Academy, Maj. Gen. Christian H. Clarke, Jr., Jan 42
 NCO Academy, 3d Infantry Division, Aug 50
 National:
 Aeronautics and Space Administration (NASA), Feb 63; Oct 61
 Commitment, Feb 2
 Guard History, Mar 10
 Security role of Army, Apr 2
 Strategy Seminar, Jun 63

NATO (North Atlantic Treaty Organization):
 Community Relations, Aug 33
 Nike firings, Jul 62
New Breed of Fighting Man, A. Col. John T. Corley, Sep 6
 New Chief of Staff, Jan 4
New Course in National Security, Mar 60
New Weapons on Display, Feb 53
 Night-seeing kit, Dec 63
Nike Construction on Taiwan, Col. Hamilton W. Fish, Apr 44
 Nike dogs, Feb 29
 Nike-Hercules, Jan 62; Sep 64; Oct 61; Nov 62; Dec 62, III
Nike-Hercules Scores Kill, Dec III
 Nike-Zeus, Feb 62; Mar 51; Aug III; Nov 62
Nike-Zeus—Our Developing Missile Killer, Col. John G. Zierdt, Dec 2
Nike-Zeus Test Vehicle, Mar 51
 XIX U. S. Army Corps (Reserve), Jan 60
 Noncommissioned Officer training, Jan 42; Mar 22; Aug 50; Sep 25
Now Picture This: Capt. Charles A. Crowe, Sep 42
 Nuclear research reactor, Sep 62; Oct 61

O

Oakes, Lt. Gen. John C., Feb 61
Of Men and Missiles, Lt. Col. Philip J. Corso, Oct 18
Officer Assignments and Career Development, Maj. Gen. George E. Martin, Nov 12
 Officer:
 Active Duty, Jan 60
 Assignment Directorate (OAD), Sep 60; Nov 12
 Assignments in USAREUR, Dec 62
Officer Promotion, Lt. Col. E. L. Waddell, Jr., Feb 14
 Olympics, Army role in, Jun 25
One Army and the National Security, Gen. Lyman L. Lemnitzer, Jan 2
 One Army:
 Conference, Jan 64
 Contest, Dec 64
 History, Jan 2
 Poster, Apr IV
 Signal Training Center, Nov 60
 U. S. Army Infantry School classes, May 62
 Operation:
 Ranger Bulldozer, Feb 47
 Searchlight, Jan 64
 Operations Research Office (ORO), Jun 22
 Ordnance Corps (*See also Missiles, Weapons*)
 American Ordnance Association, Feb 53

Ordnance Corps—*continued*
 Cultural program, Sep 61
 Electronic trouble-shooting, Jan 61
 Fluid Amplifiers, Oct 31
 Guided Missile School, May 51
 IROAN approach, Jun 50
 Longhorn, Jan 60
 M60 development, Sep 39
 Missile Command (AOMC), Dec 4
 New weapons listed, Feb 53
 Nuclear research reactor, Sep 62;
 Oct 61
 Pacific Missile Range, Dec 64
 Roll-on Roll-off test, Feb 58; May
 63
 Safety program, Dec 12
 Sergeant missile system, Jan 62
 Oversea installations, Feb 6

P

Pacific:
 Army in Hawaii, Jul 2, 14
 Campaign history, Jan 63
 Missile Range, Dec 64
 Scatter Communication System,
 Sep 63
 Packaging symposium, Feb 64
 Parachute harness release, Sep 58
Parachuting for Sport, Capt. Charles
 J. Bauer, Sep 54
 Patterson, Robert P., Memorial
 Award, Jun 63
 People-to-People:
 Chilean earthquake aid, Aug 62
 Command & General Staff College,
 Nov 54
 Essay writing, Jul 63
 Field Report from Europe, Aug 32
 International Night, Aberdeen
 Proving Ground, Sep 61
 II U. S. Army Corps, Jul 30
 Seventh Army Symphony Orches-
 tra, Dec 52
 Pershing, Gen. John J., Centennial,
 Oct II, 2
 Pershing missile, May 61; Jun 62; Jul
 62; Sep 60; Oct 61
 Personal Affairs Portfolio, Aug 54
 Personnel:
 Attitude Survey, Jun 39
 Careers for Officers, Jan 29; Feb 14;
 Aug 24; Nov 12
 Foreign, training of, Nov 54
 Importance, Feb 22; Apr 8; May 2,
 4; Oct 25
 Personal Affairs Portfolio, Aug 54
 Survivor Assistance Program, Aug
 58
 Uniformed Services Contingency
 Option Act, Oct 26
 Will, making a, Jun 57
 Pest control, fog machine, Mar 63
 Petroleum, Oil, Lubricants, Dec 46

Physical Combat Proficiency Test,
 Col. James E. Reilly, USA-Ret.,
 Dec 22
 Picture Story exercise, Sep 42
Pioneering in IGY Research, Clarence
 T. Smith, Mar 32
Plastic Foam Shelter, Apr 59
 Polar studies, Apr 62; Jul 36
 Polls in Army, Jun 38
 Postal Service, Jul 56
 Poster Series, Apr 64, IV; May 64, IV;
 Jun 64, IV; Aug 64, IV; Nov IV
 Potter, Maj. Gen. W. E., Nov 20
 Powell, Gen. Herbert P., Nov 62
 Prefabricated buildings, Apr 62
President's FY 1961 Army Budget,
 Apr 24
 Principles of Reporting, Jun 44
 Proficiency Pay, Oct 61
 Project:
 Advent, Dec 17
 Lead Dog, Aug 21
 MAN, Aug 2 (Pictorial Section); 61
Project MAN at Fort Benning, May
 issue
 Promotion, officer, Feb 15
 Puerto Pine/Big S'am, evaluation,
 Oct 39
*Putting Life in the One Army Con-
 cept*, Pvt. R. A. DuBill, Nov 60

Q

Quarrel water repellant clothing, Mar
 62
 Quartermaster Corps:
 Aircraft maintenance hangar, Dec
 63
 Food studies, Jul 64; Sep 63
 IGY research, Mar 42
 Insulated boot, Aug 63
 Plastic Foam Shelter, Apr 59
 Quickserve meals, Jan 60
 Water repellant clothing, Mar 62

R

Radar:
 Airborne system, Aug 31
 Reconnaissance, portable, Oct 62
 Radiosonde, Sep 62
 Ranger training, Sep 6
 Reading List, Oct 54
Ready to Fight, Maj. Gen. Louis W.
 Truman, Oct 44
 Recoilless rifle, 90mm, Jan 41
Red Cross Covers Home Base, The,
 William R. Breyer, Mar 7
 Redstone Arsenal, Oct 61
Repair Rather than Rebuild, Col.
 William B. Latta, Jun 50
 Reports in Army, Jun 43
 Research and Development:
 Army in IGY, Mar 32
 Caribou aircraft, Jan 60
 Chemical Corps, Apr 50; Sep 60

Control functions, Dec 62
 Fellowship Study Program, Aug 28
 Jet Assist, Jan 62
 Man and equipment, May 38
 Weapons, May 44; Dec 28
 Watervliet Arsenal, Dec 28
Reserve Component Duty, Maj. Frederick S. Otis, USAR, Jan 18
 Reserve Officers Training Corps:
 Curriculum, May 62
 One Army, Jan 22
 II U. S. Army Corps, Jul 26
 Reserves:
 Army National Guard, Jan 8, 61;
 Mar 10
 Assignments, May 63
 Duty with Active Army, Jan 18
 Forces, May 22
 Forces Act of 1955, Jan 27
 Officers Association awards, Aug 62
 School enrollment, Apr 63
 II U. S. Army Corps, Jul 25
 Summer training, Aug 61
 Resuscitator, Jan 35
 Rockets (*See Missiles*)
 Exploration, Mar 36
 Firing device, Nov 62
 Guided Missile Agency, Dec 4
 Roderick, George H., Dec 21
 Roll-on Roll-off Techniques, Feb 58
 Ruby Maser, Aug 52
 Russian Army training, Jan 28

S

Safety Also Serves, Thomas H. Wilkenson, Dec 12
 Sample Survey of Military Personnel, Jun 39
 Satellites:
 Courier, Dec 17
 Explorer, Apr 63
 Project Advent, Dec 17
 Tiros, Jun 65
Saturn Static Firing, Aug 30
 Saturn Tower, May 62
School for Military Meteorologists, Anthony D. Kurtz, Dec 40
 2d Airborne Battle Group, Jul 62
Secretary Replies, The, The Hon. Wilber M. Brucker, Mar 2
Security Dogs for Nike Sites, Feb 29
 Sergeant System, Jan 62
 Service Careers for Women, Feb 64
SETAF Is a Friendly Word, Dr. Enzo Stanghellini, Aug 38
 Sevachko, Sgt. Edward F., Mar 24
 Seventh Army Symphony Orchestra, Dec 52
 Siple, Dr. Paul, Mar 41
 Signal Corps:
 Airborne radar system, Aug 31
 Arctic Expeditions, Jul 36
 Battle telephone, Oct 62
 Combat Surveillance, Mar 52

Courier satellite, Dec 17
 Electronic testing facilities, Aug 61
 Flying TV station, Oct 63
 History of, Jul 32
 IGY activities, Mar 45
 Meteorological training, Dec 40
 Midwest Relay Station, May 62
 Miniaturization program, Sep 46
 Missile support, Jul 42
 Night-seeing kit, Dec 63
 Pacific Communications net, Sep 63
 Pershing missile training, Dec 23
 Polar ice measurements, Apr 62
 Radiosonde, rocket-borne, Sep 62
 Rare metals studies, Mar 63
 Ruby Maser, Aug 52
 Single radio circuit channel, Oct 63
 Southeastern Signal School, Dec 60
 Synthetic diamonds, Oct 62
 Weather satellite, June 65
 Signal Missile Support Agency, Jul 42
 Signal Supply Agency, Sep 61
 Single Manager, Aug 62
 Snyder, Murray, Mar 11
 Social Security, Feb 61
 Soil trafficability studies, Jun 63
Soldier, American, Model 1960, Aug 2
Soldier, Leader, Statesman—Gen. George C. Marshall, Sep 2
Soldier, The, Gen. Bruce C. Clarke, Feb 22
 Soldier Voting, May 61
 Soviet Union:
 Attitudes on Use of Military Power, Jun 32
 Soldier Training, Jun 28
 Special Warfare, Jun 2
Speeding Transportation Supplies, June 17
 Sports:
 Army in Olympics, Jun 25
 Parachuting for, Sep 54
 Standardized engines, Mar 64
Strangers No More, Col. Lowell T. Bondshu, Nov 54
 Strategic:
 Air Command, May 20
 Army Corps, Apr 3, May 19
 Army Forces, Feb 9
 Planning history, Apr 63
 Strategy, National, Feb. 2
 Strongarm missile, Feb 63
Support in Combat, May 26
Survivor Assistance Program, Maj. James W. Baxley, Aug 58
 Swallow reconnaissance drone, Sep 50
 Synthetic diamonds, Oct 62

T

TI Through TV, Sp5 Charles L. Allen, Jr., Dec 60

TV *Eyes on the World's Weather*, Jun 65
 TV in training, May 50, Dec 60
Tactical Unit Reporting, Maj. Thomas D. Drake II, Jun 43
 Taiwan, Nike construction, Apr 44
 Target Map Coordinate Locator, Apr 63
 Tear gas developed, Aug 63
Teaching Missile Men, Col. H. S. Newhall, May 50
Teeth for the Free World Dragon, Capt. Judson J. Conner, Nov 32
Tell the Folks Back Home, (Pictorial), Oct 56
 Tellurometer, Sep 62
Test of Airlift Capabilities, Oct 39
 Thermograph T-2, Aug 53
 3d Battalion, 14th Armored Cavalry Regiment, Oct 64
This is Special Warfare—U.S. Army Style, Col. William H. Kinard, Jr., Jun 2
 TIROS weather satellite, Jun 65
To Train, To Lead, To Win, Lt. Col. Gerald R. Wilson, Sep 25
Today's Challenge to Tomorrow's Leaders, Col. Richard G. Stilwell, Sep 16
Toward a Modern Army, Nov 22
 Training:
 Aggressor, Feb 34
 Airborne, Sep 6
 All-service missile, Mar 62; May 63
 Allied forces, May 21
 Armor, Sep 33
 Combat surveillance, Feb 63
 Desert, Sep 33
 Dogs, Feb 29
 Hawaii, Jul 4
 Leader's Reaction Course, Aug 50
 Missile, Mar 22; Oct 18
 Noncommissioned Officers, Jan 42; Mar 22; Sep 25
 Pershing missile, Dec 63
 Ranger, Sep 6
 Russian Army, Jun 28
 II U.S. Army Corps Reserves, Jul 25
 Signal for reserves, Jan 61
 Special Warfare, Jun 2
 TV in, May 50; Dec 60
 War Games, Dec 34
 Transportation Corps:
 Air Cars, Jul III
 BARC ordered, Jul 64
 Beach Discharge Lighter, Feb 58
 Data processing system, Jun 17
 Highway testing, Jan 50
 Materiel Command, Jun 17
 Overland Train, Jan 61
 Road testing, Jan 50
 Trouble-shooting Equipment, Jan 61
 Trudeau, Lt. Gen Arthur G., Jun

11; Aug 7; Sep 11; Oct II; Dec 62
 25th Infantry Division, Jul 4

U

Ultra Compact Circuit, Sep 50
 Uniformed Services Contingency Option, Oct 26
U.S. Army in Hawaii, The, Maj. Gen. J. E. Theimar, Jul 2
 U.S. Flag, Jul 62
Unknown Dead at Gettysburg, Nov 64
Upper Atmosphere Study, Mar 50

V

Variable height pier, Feb 63
 Veterans Day, Nov 64
 Vietnam, Army, Nov 32
 von Kann, Brig. Gen. Clifton F., Feb II, Apr II

W

WAAC Service, Jan 61
 Waite, Amory, Mar 42
 War Games Division, USCONARC, Dec 33
 Water resources, Dec 55
 Watervliet Arsenal, Dec 28
 Weapons:
 Chemical, Biological, Jan 32
 Claymore, Aug 46
 Development, Dec. 28
 Jet assist devices, Jan 62
 M14 Rifle, May 61
 M60, Sep 38
 Medium Assault, Jan 41
 New, Feb 53
 90 mm recoilless rifle, Jan 41
 Project MAN displays, Aug 6
 Research and Development, May 44; Dec 28
 Weather observations, Jul 35; Dec 40
 West Point:
 Leadership training, Sep 17
 National Security Problems Course, Mar 60
 West Point Prep, Apr 60
 Where the U.S. Army Stands Today, The Hon. Wilber M. Brucker, Apr 2
 Will, making a, Jun 57
 Willey, Robert H., May 62
 Women's Army Corps, College Junior Orientation Course, Mar 28

Y

Your Personal Affairs, DOD pamphlet, Aug 56
Your Family's Guideline, Capt. John P. Crawford, Aug 54
 Yukon River Power Sites, Jan 63

Z

Zeus (See Nike-Zeus)
Zeus Aloft, Aug III

INDEX OF AUTHORS

- Allen, Sp5 Charles L., Jr., *TI Through TV*, Dec 60
- Bauer, Capt. Charles J., *Parachuting for Sport*, Sep 54
- Baxley, Maj. James W., *Survivor Assistance Program*, Aug 58
- Berger, Maj. Casper and Chastain, Prof. James J., *Consider the Odds*, Oct 26
- Bondshu, Col. Lowell T., *Strangers No More*, Nov 54
- Breyer, William R., *The Red Cross Covers Home Base*, Mar 7
- Brooks, Col. Morton P., *Community Relations is Everybody's Business*, Aug 33
- Brucker, The Hon. Wilber M., *The Secretary Replies*, Mar. 2
Where the U. S. Army Stands Today, Apr 2
- Chastain, Prof. James J., and Berger, Maj. Casper, *Consider the Odds*, Oct. 26
- Clarke, Gen. Bruce C., *The Infantryman*, Nov 2
The Soldier, Feb 22
- Clarke, Maj. Gen. Christian H., Jr., *NCO Academy*, Jan 42
- Conn, Dr. Stetson, *Guardian of the Pacific*, Jul 14
- Conner, Capt. Judson J., *Teeth for the Free World Dragon*, Nov 32
- Corley, Col. John T., *A New Breed of Fighting Man*, Sep 6
- Corso, Lt. Col. Philip J., *Of Men and Missiles*, Oct 18
- Crawford, Capt. John, *Your Family's Guideline*, Aug 54
- Crowe, Capt. Charles A., *Now Picture This*, Sep 42
- Curtis, Maj. Gen. Raymond W., *II U. S. Army Corps—Where Reservists Prepare for M-Day*, Jul 24
- Diercks, Col. Frederick O., *Documents of Decision*, Oct 8
- Decker, Gen. George H., *The Army's Contribution to the National Commitment*, Feb 2
- Drake, Maj. Thomas D., II, *Tactical Unit Reporting*, Jun 43
- DuBill, Pvt. Robert A., *Putting Life in the One Army Concept*, Nov 60
- Eggleston, Brig. Gen. Howard K., Jr., *Logistics for the Future*, June 12
- Emmerich, Col. Rollins S., *Aggressor Adapts to the Atomic Age*, Feb 34
- Ennis, Maj. Gen. William P., Jr., *The Army's Top-Level College*, Jan 54
- Fish, Col. Hamilton W., *Nike Construction on Taiwan*, Apr 44
- Fullbright, Lt. Col. Mary C., *The Army Shows Them*, Mar 28
- Groover, M/Sgt. Robert L., *Army Role in the Olympics*, Jun 24
- Grundling, Lt. Col. David L., *The Flying Bulldozer*, Feb 46
- Hanmer, Brig. Gen. S. R., *City Under the Snow*, Aug 16
- Heaton, Lt. Gen. Leonard D., *If Disaster Comes*, Jan 10
- Hitch, Lt. Col. Kenneth S., *The Army Takes a Poll*, Jun 38
- Hoehling, A. A., *John J. Pershing—the Human Side*, Oct 2
- Hussy, M/Sgt. Allis F., *Cossacks in Khaki*, Apr 56
- Kelty, Capt. Henry J., *USA-Ret., Archive of Courage*, Dec 18
- Kinard, Col. William H., Jr., *This is Special Warfare—U. S. Army Style*, Jun 2
- Kurtz, Anthony D., *School for Military Meteorologists*, Dec 40
- Lance, Lt. Col. John E., *Man—the Essential Ingredient*, May 4
- Latta, Col. William B., *Repair Rather than Rebuild*, June 50
- Lawrence, Maj. Willis D., *The First Twenty Years*, Jul 56
- Lemnitzer, Gen. Lyman L., *Army Air-lift Requirements* Oct 32
Army Plans and Programs, Apr 16
One Army and the National Security, Jan 2
- McGowan, Maj. Gen. Donald W., *Army National Guard Today*, Mar 10
- Martin, Maj. Gen. George E., *Officer Assignments and Career Development*, Nov 12
- Milton, The Hon. Hugh M., II, *Modern Army Needs MAN*, May 2
- Monahan, Brig. Gen. J. C., *Light, Compact, Reliable*, Sep 46
- Nelson, Capt. William, *Industrial Partnership in Chemical Research*, Apr 50
- Newhall, Col. H. S., *Teaching Missile Men*, May 50
- Oakes, Lt. Gen. John C., *Men and Missions—the Army's Tasks*, May 14
- Otis, Maj. Frederic S., *USAR, Reserve Component Duty*, Jan 18
- Parker, Maj. Gen. T. W., *The Big Red One*, Nov 44
- Quinn, Maj. Gen. William W., *Can You Fill This Chair?* Jan 29
- Reilly, Col. James E., *USA-Ret., Physical Combat Proficiency*

- Test*, Dec 22
 Robson, Capt. George L., Jr., *Claymore* Aug 46
 Rogers, Lt. Gen. Gordon B., *Battles Without Bloodshed*, Dec 32
 Rosenthal, Alfred, *Developing Our Water Resources*, Dec 55
 Roth, Capt. Clifford M., *Making a Will*, Jun 57
 Shirley, Col. Jackson E., *Brainpower and Manpower*, Aug 24
 Smith, Clarence T., *Pioneering in IGY Research*, Mar 32
 Smith, Sgt. David G., *Modern Army NCO*, Mar 22
 Stanghellini, Dr. Enzo, *SETAF Is a Friendly Word*, Aug 38
 Stevenson, Charles S., *The Soviet Soldier and His Army*, Jun 28
 Stilwell, Col. Richard G., *Today's Challenge to Tomorrow's Leaders*, Sep 16
 Stubbs, Map. Gen. Marshall, *Invisible Weapons for The CBW Arsenal*, Jan 32
 Sullivan, Brig. Gen. John Barclay, *Desert Training Center*, Sep 32
 Thames, Brig. Gen. William M., *Combat Surveillance Looks to the Future*, Mar 52
 Theimer, Maj. Gen. J. E., *The U.S. Army in Hawaii*, Jul 2
 Tisdale, Col. Walter M. D., *It's Always Tomorrow*, Dec 28
 Tonks, Col. Paul B., *Army Petroleum Logistics*, Dec 46
 Trudeau, Lt. Gen. Arthur G., *Key to National Security*, May 38
 Truman, Maj. Gen. Louis W., *Ready to Fight*, Oct 44
 von Kann, Brig. Gen. Clifton F., *Mobility Now*, Apr 32
 Waddell, Lt. Col. E. L., *Officer Promotion*, Feb 14
 Webster, Sp4 Philip J., *Musical Ambassadors in Army Green*, Dec 52
 Wilkenson, Thomas H., *Safety Also Serves*, Dec 12
 Wilson, Col. Albert A., *Better Highways and National Defense*, Jan 50
 Wilson, Lt. Col. Gerald R., *To Train, To Lead, To Win*, Sep 25
 Zierdt, Col. John G., *Nike-Zeus—Our Developing Missile Killer*, Dec 2

For your convenience, you may send the Digest home . . .

Superintendent of Documents
 U. S. Government Printing Office
 Washington 25, D. C.

Please enter a subscription for one year (twelve issues) for ARMY INFORMATION DIGEST.

I enclose payment of ☐ \$2.25 for mailing to domestic or APO address.
☐ \$3.00 for mailing to foreign address.

Send to

Address

Single copy to U. S. or APO address, 25 cents; foreign, 32 cents.
 (Make check, postal or money order payable to Superintendent of Documents.)

Back Cover

SIXTH in a series of posters supporting Army Information objectives, DA Poster 355-9 is currently being distributed to Army Units and organizations world-wide to advance the theme: "All for One and One for All." It is scheduled for release world-wide to coincide with the anniversary of the launching of the One Army concept by Secretary of the Army Wilber M. Brucker.

**Aluminum Barrel,
Shotgun Style—**

New Grenade Launcher Increases Range, Firepower

FIRST Army weapon to use an aluminum barrel, a new grenade launcher—the XM79—has been developed to provide capability of destroying enemy machine gun nests, bunkers and small troop concentrations out to a maximum range of 400 meters. It is now in limited production at Springfield Armory.

Resembling a single-barrel shotgun in appearance, the new weapon fires a 40mm cartridge which weighs only nine ounces complete. The projectile itself weighs six ounces. Because the projectile is fired at the low velocity of 250 feet per second at low pressure, use of aluminum in both the barrel and the cartridge case is possible. The entire weapon weighs only six pounds for its 28.6-inch length.

The launcher system, which has been extensively tested, is designed to give the individual soldier an area fire

capability between the maximum range of the hand grenade and a minimum mortar range. Used in combination with the new M-14 rifle and M-60 machine gun, the new 40mm weapon will enhance the mobility, firepower and independence of action of the Infantry platoon.

The system was jointly developed by Springfield Armory and the Picatinny Arsenal. Participating contractors are the Electronics and Ordnance Division of AVCO Manufacturing Company, Connorsville, Indiana; Minneapolis Honeywell Company, Minneapolis, Minnesota; Harvey Aluminum Company, Torrance, California; and Chamberlin Corporation, Waterloo, Iowa.



ALL FOR ONE



**...AND
ONE
FOR
ALL**



U.S. ARMY

"That this nation shall not perish"